SUPPLEMENT.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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Original Correspondence.

THE SCOTCH IRON TRADE—No. XVIII.

THE COLTNESS IRONWORKS.

The Coltness Ironworks is the second largest establishment of its kind in Scotland—the first being, of course, the works at Gartsherrie. There are, altogether, 12 furnaces at Coltness, and all of them are now, and have for many months past, been in blast. The works are situated on the Caledonian Railway, between Motherwell and Wishaw, in the centre of one of the richest mineral fields in the whole of Scotland. They were established about the year 1843 by the Messrs. Houldsworth, of Glasgow, who are still the chief proprietors. The Messrs. Houldsworth did not at first contemplate the erection of works for the manufacture of pig-iron. They acquired something like 3000 acres of land in the immediate locality of the site of the works for the purpose of working the excellent and ample supplies of coal that it contained. With a characteristic spirit of enterprise, however, they determined, after this initial purchase had been made, to proceed with the erection of works that would at least supply them with the pig-iron necessary for their operations in Glasgow as machine makers. Although the site selected offered incalculable advantages, so far as its proximity to the raw material was concerned, considerable difficulty was for some time experienced in regard to the means of transit. For a considerable time after the first furnace was put in blast, in March, 1839, the produce of the works had to be carted to Glasgow—a distance of 18 miles—for transhipment to other ports. A like amount of difficulty had to be encountered in bringing the minerals to the works. The first step taken in the direction of bringing the district under the influence of railway communication was the construction of the line between Glasgow and Holytown. Some time later the railway was continued to Wishaw, and from thence the company constructed a private line to their works at Coltness. They also constructed the Morningside Railway to Crofthead, for the purpose of affording ready access to their valuable mineral fields in that quarter. Since the railway opened up the district around Coltness it has been entirely transformed. New works have sprung up, and new pits have been opened in every direction. At the present time it is one of the most flourishing districts in the whole of Scotland, and so far from suffering, like the Coatbridge and Airdrie districts, from partial exhaustion, its resources are almost illimitable, and capable of a much greater development. The uninterrupted prosperity of the Coltness Works, under the management of Mr. James Hunter, is only a reflex of the expansion and success of all other operations, collateral or remote, commenced and carried out in their vicinity during the last 30 years, and, as will be seen from what we are about to describe, there is no prospect of any relaxation of the energy and enterprise that have made the Coltness Works what they are.

The Coltness Company have at present, as we have indicated, 12 furnaces in blast, the aggregate annual production of the whole being about 120,000 tons. Each furnace is about 52 ft. in height, 16 ft. wide at the boshes, and open at the top, no attempt having hitherto been made to effect economy by either the bell and cone arrangement, or by the utilisation of the waste gases from the furnaces. The material is raised to the charging ports by means of four hoists, all of them worked by ordinary steam-engines on the usual plan, except one that has recently been constructed on another method, invented by Mr. Hunter, and claiming to possess several advantages peculiarly its own. The blast employed at Coltness is from 800° to 900° Fahr. In the stoves a temperature reaching to 1000° is obtained. The charge used in the furnaces for No. 1 pig is 15 cwt. of ironstone, 16 cwt. of coal, and 1½ cwt. of limestone; for No. 3 it is 14 cwt. of ore, 16 cwt. of coal, and 1¾ cwt. of limestone. The works are admirably laid out, and are so intersected by tramway lines that the use of manual labour is reduced to a minimum. The engines that raise the blast are, without exception, the finest of their kind in Scotland. One of the number, a single beam-engine, has a blowing-cylinder of 120¾ in. diameter; and there are two other pairs of coupled engines having 44-in. steam-cylinders, and 105-in. blowing cylinders respectively. Each engine is fitted with an indicator that registers the number of strokes performed per shift, and thus affords the manager a certain means of calculating the regularity with which they are worked. The Coltness Ironworks have for many years occupied the premier position in Scotland as regards the quality and value of the pig produced, and it was only within the last two months that they were overtaken by the Gartsherrie brand, which now occupies an equal footing.

Arrangements have just been concluded between Mr. Hunter and Mr. William Ferrie, the manager of the Monkland Iron and Steel Company's Works at Calderbank, for the right to alter the whole of the furnaces at Coltness to conformity with the now well-known principle invented by the latter gentleman. It is now a little over two years since Mr. Ferrie's patent was made public. Since then, two furnaces erected at Calderbank have demonstrated its value and utility, not only to the proprietors of that establishment, but to many scientific and practical gentlemen who have made an inspection of the works, and watched the operation of the furnaces for themselves. Since then, also, the proprietors of the Dalmellington Works have undertaken to apply the patent to the whole of the furnaces, and the Coltness Company have not been long in following suit. Only two furnaces are to be altered in the meantime. The adoption of Mr. Ferrie's principle involves blowing out the furnaces under reconstruction for the greater part of a year, and to throw many of their furnaces out of blast when their No. 1 brand is quoted at 165s. per ton would involve to the Coltness Company a ruinous loss, that could not be compensated for even by the great economy promised by the use of the new system. Therefore, Mr. Hunter proposes to reconstruct the furnaces by slow degrees. The bricks for the alteration of the first two are now being made, and the work is likely to be commenced in the course of a few weeks.

It may be interesting to take a glance at the economical results of the use of the Ferrie furnace, so far as the Coltness Works are concerned. In the ordinary hot-blast furnace used throughout Scotland the average proportion is from 50 to 55 cwt. of coal for every ton of pig-iron made, whereas by Mr. Ferrie's process the same quantity, and a rather better quality, of iron can be made with 32 to 34 cwt. of coal, thus giving a saving in coal alone of about 20 cwt., or 1 ton, per ton of iron manufactured. Besides this, however, the dross or slack used in the boilers that generate steam is also saved. The average production of the Coltness Works is over 100,000 tons of pig per annum, and the actual saving of coal in the furnaces would thus be about 100,000 tons, which at the present marketable value of 20s. per ton, represents a saving of over 100,000*l.* a year. This is altogether apart from the saving of dross used in the boilers, now selling at from 5s. to 8s. per ton, and which cannot be less than 20,000*l.* more. This is no mere theoretical calculation, but one based on results obtained at the Monkland Works in the course of every day experience. Hence, it is not difficult to understand why the Ferrie furnace should command the approval of practical men. Mr. Jeremiah Head, of the Newport Rolling Mills, Middlesborough, sensibly remarked at the recent meeting of the Iron and Steel Institute in Glasgow, in discussing Mr. Lauth's system of three-high rolls, that apart from prejudice altogether, inventors could not expect that ironmasters would at once take every new invention to their arms—that they had a large capital sunk in old works, the predilections of their workmen to overcome; and many other considerations prevented them from giving immediate effect to every new patent or process, even although fully satisfied of its superiority over the old system. Mr. Ferrie does not expect that the ironmasters of either Scotland or England will all at once adopt the process, but he is so satisfied of its merits that he is justified in regarding it as the furnace of the future. Perhaps, indeed, no improvement in the process of iron smelting has been attended with anything like the same success since Neilson made his name immortal by the invention of the hot blast.

But to return to the operations of the Coltness Iron Company. Both slaty band and clay band ironstone are used in the furnaces. The former is obtained in large quantities at Crofthead; the latter is worked on the company's own land at Carluke. Recently the company have entered into several new and important leases for the supplementing of their supplies. They have obtained an exclusive lease of the hematite mines at Garleton, in East Lothian, which they are taking the most vigorous measures to develope. In the neighbourhood of Muirkirk they have leased another valuable hematite deposit, on which they are now drawing. The limestone is principally obtained from Camps, near Mid-Calder, where there is a deposit 42 ft. in thickness, which is now being wrought at the rate of 70,000 tons per annum. The chief supplies of coal are obtained from Overton and Shawfield Collieries, near the works, in Lanarkshire, and from Crofthead and Woodend, in Linlithgowshire. On an average the company employ upwards of 1500 men, including both the ironworks and the mines.

COAL-CUTTING BY MACHINERY.

Sir,—The remarks in the article on "Coal-Cutting by Machinery," in the Journal of Sept. 21, would lead your readers to suppose that the coal-cutting machine of Messrs. Gillott and Copley, which was exhibited at the Cardiff Show, and lost there, was the only machine these patentees have finished. This is not the case; they have long had one regularly working at the Wharncliffe Silkstone Colliery, near Barnsley; it is still there, and producing very satisfactory results. The one shown at Cardiff was made for the same proprietors, it was removed from the show-yard by one of the railway companies, without orders, and up to the present time they have been unable to trace it. Messrs. Gillott and Copley have several other machines in progress, some of which are very nearly ready for delivery. This machine has not been entered to compete for Mr. Firth's prize. The subject was fully considered by the patentees, and it was concluded that, under all the circumstances of the case, it was the wiser course not to do so; and the statement made in the article above referred to fully confirms me in the opinion that the decision was a sound one. This machine works well, and shows very satisfactory results, with a pressure of only 25 lbs. to 30 lbs., and it is adding largely to the difficulties attendant on the introduction of coal-cutting machinery to attempt to introduce machines which cannot work with less than from 60 lbs. to 70 lbs.

ISAAC GRAY BASS,
Sheffield Oct. 3. Agent for Messrs. Gillott and Copley.

MINE GASES, AND MODERN CHEMISTRY.

Sir,—If Mr. "G. H. Pickburn, Chemist," of Wednesbury, will prove what he states with reference to mine gases to be true he may at once earn for himself a fellowship of the Royal Society; an academical degree of Doctor of Science; or any other honour which he may select, and which it is in the power of the world of science to bestow upon those whose knowledge it is most desired to reward.

Mr. "G. H. Pickburn, Chemist," states that "mines do not give off explosive gases, but hydrogen gas, and when mixed with the air in circulation in the mine this becomes carburreted hydrogen gas;" but I defy Mr. "Pickburn, Chemist," to prove that assertion. The statement is false, and the propagation of it is likely, unnecessarily, to lead other ignorant people into fatal danger. E. D. H.

IS NOT SCIENCE SOMETIMES UNSCIENTIFIC—ILLOGICAL?

Sir,—Some remarks made by Mr. Robert Hunt some time since at the South Caradon meeting induces me to address you under the above heading. Chemistry is pre-eminently an experimental science, and its science is in its mode of experimentations by specific rules, and the constancy of results which follow, embracing, as it does, a formula expressed or implied—that is to say, acknowledged or proposed—for all its procedure, which is self-asserting as a science.

The formation of metalliferous veins is, probably, a natural chemical elaboration, aided by mechanical agencies, both of which agencies in nature are actuated by an invisible power, which can only be inferred from the effects produced. Mr. Hunt stated, as nearly as I can remember without reference to your report, that Mr. Robert Were Fox entertained the idea that electricity was the producing cause of metalliferous veins, and then immediately added, in effect, that all the attention hitherto bestowed upon this branch of natural philosophy was without avail,—that we were as far as ever from any correct knowledge or ideas of the operation.

I never thought from Mr. Fox's experiment that he intended to convey the notion that electricity was the producing cause of metalliferous deposits, but simply that it was a powerful, indeed an indispensable, agent, brought into operation subsequent to other agencies which had been manifestly at work before it. An impulse seems to have been imparted by the electricity discharged, quickening in its operation molecular affinities, and effecting, if not entirely producing, crystallisation.

From the nature of metalliferous veins, and that of the condition under which they occur, what kind of evidence, it may be asked, is necessary to frame a rational and generally acceptable theory regarding the formation of metalliferous veins. In what direction are we to look for the avenues of light to guide us in the pursuit of knowledge in this arduous and obscure pathway? If extended researches be made into the physical geography of our globe, and all acquired which can be known on that head, it would leave the explorer as far in the dark concerning the internal mechanism of the earth as though he had no acquaintance with its surface. Limited comparatively as are our opportunities for making observations concerning so important a branch of human knowledge, sufficient sources are available to enable us to determine in a most satisfactory manner that two principal agencies are employed in vein formation. To doubt this is to doubt the evidence of our senses, and under circumstances where doubts are inadmissable. A thousand facts in nature are accepted upon no better testimony than is afforded as regarding the origin and formation of metalliferous veins. The beautiful superstructure of geological science, as irrefragible as the laws which govern the planetary motions, reposes wholly on reasonings and inferences *aposteriori* from facts of observation. It may be said that these facts are more palpable than any which are known relating to the formation of metalliferous veins, but I must contend that they are not, as both classes of proofs are equally evident to the senses, and incontestible. The medals of creation, as they are called, testify of an economy different from the present in the prehistoric periods, whilst the mineral-burdened aqueous currents percolating the interior of the crust of our earth are no less vocal and intelligible in their testimony concerning operations and changes now going on in the mineral kingdom. The agency of water, no less than electricity, is indispensable in the formation of metalliferous veins. And we know from indisputable evidence that the materials borne by these currents are not fixed and constant, but that the water is at once an invader, an absorber, a conductor, and a depositor.

The evidences of the formation of metalliferous veins, it appears to me, must forever be deduced from facts of observation, and if such facts be ignored, or misinterpreted, error concerning this department of nature must continue to prevail. Such facts as are ocularly evidenced to the searching eyes and enquiring minds of men who are privileged to penetrate its arcana, and witness the mode of working of general laws and the effects produced.

If I am passing through a *level* of one of the old copper mines of Cornwall, which had been driven through a *course* of ores, and the ores extracted a generation previously, and I observe large quantities of the green and blue carbonates of copper (green especially) lying beneath little rivulets of water, issuing quietly from almost imperceptible crevices in the sides of the level, to what other conclusion could I arrive, in contemplation of such a phenomenon, but that these were the channels, and water was the vehicle, by which the masses of copper ores once filling that fine fissure were conveyed to it. If facts of this kind are no evidence of the essential agency of water in the formation of metalliferous veins, then the law and nature of evidence and of intellect require prompt and radical modifications to adapt them to the existing physical economy of the universe.

Again, I am passing over the surface of a lead mine in the eastern part of the county—Wheal Wrey to wit. I observe amongst a number of other stones bestrewing the surface one peculiar in shape, when considered in respect of its apparent composition and exterior associations. It is oval shaped, a little less in size than a shoemaker's lapstone. Its entire surface is one continuous aggregation of crystallised galena, in cubes of ⅜ in. to ½ in. So unintermittent is the crystallisation that nothing underneath was visible, whilst exterior to the crystals of galena were scattered crystals of fluor-spar, of similar dimensions to those they reposed upon. Curiosity provoked an investigation, and the stone was broken. Its interior contained no lead of any kind. It had only a *band* of galena superficially investing it, sufficiently thick for the developed crystals to lie in. Beneath this covering of galena for a radius of about 1 in. to 1¼ in. was a beautifully white crystallised carbonate of lime, of a highly sacharine texture, unmixed apparently with any other mineral, not even stained with the red oxide of iron; whilst interior to this, and constituting its nucleus, was a little *angular fragment of clay-slate* (*killas*), about 1½ in. long and about ⅜ in. to ⅝ in. dimensions at one end, and ⅜ in. to ½ in. at the other end. Are facts like those I have narrated deficient in weight of evidence to the origin and mode of formation of metalliferous veins? If the language of such hieroglyphics from Nature's book is unintelligible, then all facts in nature may be questioned, and their validity as data for practical conclusions ignored or defiantly rejected.

Ellsworth, Nye County, Nevada, Sept. 3. ROBT. KNAPP.

ECLIPSE GOLD MINING COMPANY.

Sir,—Having noticed a long letter in the Supplement to the Journal of Aug 10, purporting to have been written by Mr. John Tamblyn, you will oblige me by inserting the following few remarks. First, with reference to Mr. Tamblyn's statement in regard to the mill—expenses in connection with it—and requirements for 50 stamps. I can only say that, if the old Ida Mill mentioned by him, with its 12 stamps, had alone been purchased and perfected it would have been amply sufficient for all purposes up to and for the present time, and, indeed, for a very considerable time to come, under any circumstances. Secondly, with reference to the tramway, I have no hesitation at all in saying that it never could have stood the test of work in this climate. The damage done to it by the earthquake was comparatively trifling, and could have been repaired, but the bed, or earthwork, is so narrow that the sleepers in many places project beyond it. The sleepers themselves (longitudinal ones) barely covered with sand, and constructed of the ordinary wretched timber produced by this country, are buckled and twisted in all directions by the heat, rendering reconstruction absolutely essential. Thirdly, with regard to return of bullion alluded to by Mr. Tamblyn, I learn from our local secretary here that the clean-up, as referred to in his (secretary's) letter of March 29, was from 24½ lbs. of amalgam, which produced 97·31 ozs., and yielded

$315·27, which has been transmitted to the agents, and by them credited to the company.

The concluding paragraph of Mr. Tamblyn's letter, in which he states as follows:—"I beg to say, as I have always said, the Eclipse Mine is a good one, and with proper treatment of the ores, and good management, it is my decided opinion that it can be made one of the best paying mines on the Pacific Coast," is thoroughly and entirely absurd and ridiculous. I do not feel called upon to enter into further details upon this subject, but with reference to the value of the mines, as well as to my reports generally upon this property, the steps I have taken to prove the same, &c., and its management heretofore. Results will show who is right; or, if needful, I am willing that the matter should be referred to any thoroughly competent and non-interested party.

I have, certainly, some recollection of a person of the name of Tamblyn having introduced himself to me at Independence, but feel confident that no conversation whatever took place between us in reference to the mine or Mr. Haymen.

In conclusion, I might mention that a gentleman of mining notoriety officially sent to report on the property generally, prior to my arrival, has confirmed my views in many ways, and, among others, telegraphed to England, stating that the late management had been most extravagant. Samuel Jones. Manager.

Independence, California, Sept. 8.

RICHMOND CONSOLIDATED MINING COMPANY.

Sir,—One surprising and un-understandable assertion follows another in rapid succession respecting the doings on this company's property. The latest and richest thing to which the shareholders have been treated is that contained in last week's Journal, where it says—"The official and private information recently to hand is of a very satisfactory character. This week's cable message announces that the furnace in five days smelted 176 tons of ore, producing $9900."

Now, Sir, in pointing out to my fellow-shareholders how utterly devoid of truth is the foregoing assertion as to the information it contains being of a "very satisfactory character," I refer them to the Supplement of the Journal for July 6, page 642, where it states the product of one furnace to be as follows:—"The furnace has been, up to this time, running splendidly. If the ore continue of the same grade as during the past two weeks (indeed, ever since we started up the furnace), and should everything continue to work as well as at present, I doubt not that our gross monthly product with one furnace will run up to $90,000. Last week's product, $22,000.—R. A. Fisher." I, therefore, leave it with my brother-shareholdrs to determine in their own minds whether the product of five days, as given above—$9900—can be deemed "satisfactory," as compared with the product of one furnace for the week ending June 10, which amounted to $22,000.

But here, Sir, I can fancy someone interposing by saying—"What you say is quite true, but everything has not continued to work as well as at the time when the $22,000 was the product of one furnace in one week," for it is stated further on, in the account given in last week's Journal, as follows:—"It is explained that during the past three weeks several of the best men were suffering from lead-poisoning, and the manager has been forced to put young hands in charge of the furnace, and, as a consequence, the furnace has been kept in blast only by the greatest exertion."

My reply to this objection is as follows:—I am greatly surprised, in the first place, to be informed of such an unfortunate occurrence having happened, for if your readers will turn with me to the Supplement of the Journal of Aug. 24, page 810, they will find a very able and interesting letter respecting the Richmond Mines. The writer, under the heading of "Utilisation of the Waste Wind," says—"By a most simple contrivance the wind can be partially or entirely turned from the inside of the furnace and made to pass through a series of pipes placed outside the furnace and under a hood that completely surrounds it, and thence up the ventilating shaft in front of the furnace. During the process of barring-out, all the wind thrown by a No. 8 Sturtevant blower passes through the ventilating shaft, and the result is that the workmen at the Richmond furnace are no longer leaded (poisoned by lead fumes). The universal adoption of Prof. Fisher's system must be only a question of time at any lead smelting works where the health of the workmen is at all considered."

I am surprised, secondly, to find that our manager (?), when he found his invention did not preserve the men at the furnace from being "leaded," should have persisted in keeping "several of the best men" at the furnace till they were poisoned, for had he arranged to have had always one or two out of the "several best men" at the furnace, and then, after a short time, a fresh lot of men under the guidance of others among the "best men," why, in this way the greater proportion probably of those engaged at the mine would, in their turn, learn how to manage the furnaces. To my mind nothing appears more easy.

This is management!!! And one of the matters to be considered and discussed at the forthcoming general meeting will be how much the company has to pay for it, as well as the exact amount each officer of the company receives yearly for his services, together with a minute and exact account, giving full particulars of all expenses, for the shareholders in this company, at the approaching meeting, will not feel themselves justified in passing accounts which may be presented (as is the case in too many instances) in lumps of items. No, no; this will never do; we must know to the penny, and that, too, how it has been spent, for I have yet to learn that because we happen to be fortunately possessed of a mine containing untold riches that we are, therefore, prepared to pay fabulous salaries for inferior services; and I am bold enough to predict that the present order of things will be greatly reversed after the forthcoming meeting.

Other matters for the consideration of the meeting will be—How many out of the 44,000 shares have been issued? Whether any have been disposed of recently, and, since the success of the undertaking was established, to whom sold, and price per share? What has been done with the share-money? &c.

In conclusion, I would point out one other very important resolution which should be passed at this meeting, and that is that an annual list of the names and residences in full of all the then existing shareholders be printed, and it shall be the duty of the secretary to draw up said list, and forward a copy to each and every existing shareholder, the list to be drawn up a month prior to annual general meetings, and a copy to be, post paid, forwarded at least three weeks before said annual meetings to the shareholders, and the cost of paper and printing should not exceed 2*l*. per 1000 copies.

It would appear from the following, contained in the Journal of July 6, page 642, that a very considerable amount of stupidity existed among certain parties at the time the property was purchased in not examining more minutely into the title:—"Richmond Consolidated Mining Company.—We are pleased to learn that the difficulties between the Richmond Consolidated Mining Company, of London, and the adverse claimants of property claimed by it at Eureka, Nevada, have been settled without the expense of troublesome litigation, thanks to the ability of Mr. J. J. Corrigan, one of the London managers of the Richmond Company, who came out delegated with full power to act in the premises. The gentleman himself for several years a resident of London, but an old Californian, one familiar with the ways of our people, and the rules and customs of mining communities, readily saw upon an investigation the true position of his company's affairs, and compromised matters, thus saving a large outlay of money in expensive litigation, and the more than probable loss of its mine in the end, the latter having been held under a title weak in its origin, but now made secure and invulnerable by the purchase of all conflicting claims. The price paid was $75,000." (Which I would here say is just exactly equal to the original amount paid for the property.) "We wish the Richmond Company all success, but having alluded to these difficulties once before in the shape of an advertisement, which we have since learnt conveyed a one-sided, incorrect view of the case, we would suggest for the future guidance of our 'English Cousin' that they be a little more careful in examining into titles to mining properties.—*San Francisco News Letter*, June 8." W. K. S. M.

P.S.—The words "but hope in vain" were omitted by you in my letter of last week. The clause should have read—"They go into mines, and having bought their shares, that is all they do except to wait and hope, 'but hope in vain,' as is the case in too many instances, to receive ere long a cheque as representing a dividend on their shares."

RICHMOND CONSOLIDATED MINING COMPANY.

Sir,—I think the shareholders need be under no apprehension but that full justice will be done to the promoters and their solicitor at the meeting of the Richmond Consolidated Mining Company. It will be an interesting history of how these things are managed in the City. The Sheriff elect, Mr. Perkins, will, I trust, be present, and favour us with his reasons why he thought it necessary to withdraw from the board.—*London, Oct.* 3. A Shareholder.

NEW ZEALAND KAPANGA GOLD MINING COMPANY.

Sir,—I forward with this an Auckland newspaper containing an article referring to the prospectus of the New Zealand Kapanga Gold Mining Company, which appeared in the *Mining Journal* of May 11. I should be glad if you would re-publish any portion of the article in question for the edification of the lucky (?) persons who have paid 55,000*l*. cash and 22,000*l*. in shares for the property, or the still more lucky *English* speculators who are supposed to have sold it; and, as a person largely interested in the welfare of the mines here, and, therefore, anxious that English capital should be encouraged and have fair play, I should also like to record my opinion that the cash payment of 55,000*l*. is a most striking illustration of the truth of the proverb that "Fools and their money are soon parted." W. E.

Auckland, New Zealand, Aug. 7.

"If there be one thing more than another calculated to advance the interests of the colony and the province it is the importation of English capital. It is sensitive almost to shyness, and we admit that it is necessary to bid high if the current of English capital is to be diverted to our shores. The promoters of the New Zealand Kapanga Gold Mining Company (Limited) have evidently been impressed with the importance of this fact. They desire to raise 100,000*l*. in England, and they have gone in to win. We have before us the prospectus of the company, and we venture to say that for cool assurance it surpasses anything we have ever read. It is true that a prophet is not duly honoured in his own country, and that in colonial life we are often accustomed to view our surroundings through the wrong end of the telescope. But when we gaze on the picture of the old and once abandoned Kapanga claim, that is drawn for English eyes, we stand with bated breath. How bitterly chagrined they must be who once fled precipitately from this the scene of their buried hopes, when they find that this is the very El Dorado of the southern hemisphere, and when they hear the fact confirmed by authorities before which we fall upon our face and reverently worship, chagrin must give place to despair. We greatly regret that for lack of space we are precluded from publishing the lengthened prospectus of this company entire. It is a string of pearls, and our difficulty is in singling one as deserving of superior admiration. This exceedingly valuable piece of auriferous ground is the well-known mine called the Kapanga, whereupon we are absolutely bewildered by the following dazzling corruscations:—'No gold fields are so rich—astonishing quantities of gold—enormous dividends—such astonishing production is altogether unequalled in the whole history of quartz mining—and it can be shown, on the most competent and undoubted authority, that a similar and almost identical formation exists in the Kapanga mining property, acquired by this company.' But if we would single out any portion of the prospectus it is the manner in which the former abandonment of the claim, and its being subsequently pegged off by the promoters of the present project, are delicately and gracefully handled. After the mine was filled with water, the owners left for the Thames gold fields, which at that time commenced to attract attention, the effect of which, under the colonial law, was that their rights were lost, and even eventually that the Crown resumed possession of the property in question, through whom the vendors to this company acquired their title. This, in vernacular, means that one party threw it up, and another stuck in four pegs, and so acquired the right to the claim. But we venture to say that it is as nicely put as it is possible for words to ornament an ugly flaw. But what would such a property be without testimonials? Accordingly, 'the utmost care has been taken to obtain the opinions of the most eminent geological and mining authorities on the spot—men whose great local experience fully qualifies them for the task. The directors refer with confidence to their reports (copies of which accompany the prospectus), and it will be seen they afford the most reliable evidence of the auriferous value of this great mining property.' Then follows a list of these 'most eminent geological and mining authorities,' and in the fore-rank comes one whose name is familiar to our ears as household words—Capt. William Rowe, the well-known manager of the famous Caledonian Gold Mine, and of the Thames Gold Mining and Investment Company, Thames District—a gentlemen of 30 years' experience, and of the highest character and judgment. This testimony, we are sure, is sufficient to float any company. His connection with the Caledonian Mine will be long remembered with warm feelings of admiration by all holders of stock in that company; and we think that in order to the complete success of the New Zealand Kapanga Gold Mining Company (Limited) he should be appointed mine manager. We are sure it would command confidence in the province of Auckland, and we see no reason why it should not in the London market. To this is added a list of other captains, and lesser lights in the mining firmament, but who blaze forth in the prospectus as mining luminaries of the first magnitude. As the prospectus was manufactured for the London market it is hardly fair for us to smile on a perusal. But really there is a length beyond which impulse becomes irresistible. We cannot refrain from saying that there is a sad side to this sort of thing. Strenuous and legitimate efforts are being made to raise the colony from depression, and to attract capital and enterprise. But what will be the effect of such a project as this? Stripped of its absurdity, the case is simply this—There is to be a company with 100,000*l*. capital. Of this, 55,000*l*. is to be given to the projectors for the lease of property which lately cost the price of four pegs—say, 4*d*.; though we question if these cost even so much, and whether they were not extemporised with a tomahawk or whittled with a jack-knife. The projectors also receive 20,000*l*. in shares, to show their confidence in the mine, we presume, and the remaining 25,000*l*. are to be spent in prospecting the ground. That there will be *gobemouches* found to take the bait in England we have the most perfect belief; but it is really deplorable that this is the class of thing that is going on to form the character of New Zealand mining speculation in the London money market."—*Evening Star*, July 27.

NEW ZEALAND KAPANGA GOLD MINING COMPANY.

Sir,—As some of your readers may, doubtless, feel interested in the New Zealand Kapanga Gold Mining Company, an undertaking which has, I believe, been recently floated on the London market, I enclose herewith an extract from a New Zealand paper (the *Evening Star*) on the subject, from which it will be seen that the promoters of this undertaking have, out of the 100,000*l*. which are to be raised, appropriated to themselves no less than 55,000*l*. in cash and 20,000*l*. in shares, for the mere pegging out of a piece of abandoned ground, which no one else thought it worth while to touch since the company which had formerly worked it collapsed. As people in London may not be aware of these facts, your giving them publicity in the *Mining Journal* might save some from investing in an enterprise of which the promoters, to say the least of it, are determined to have the lion's share.

Auckland, July 30. New Zealander.

DON PEDRO NORTH DEL REY GOLD MINING COMPANY.

Sir,—I noticed a week or two since in the Supplement to your valuable Journal a letter calling attention to the financial position of the company, and commenting upon the extraordinary freaks of the directors retaining at a heavy salary a captain who had failed to realise the extravagant ideas, upon the faith of which he was engaged and sent out to the mine.

Another letter appeared the following week touching upon the same matters, and further expressing doubts as to the successful working of the permanent pumping machinery now being erected. The writers of these communications are probably by this time sadder, though wiser men, and in future will save their paper and ink for some less futile purpose than making observations upon the actions of directors, for if by drawing public attention to this system of management letter writers expect any kind of satisfaction they are much mistaken.

Shareholders should know that their only duty is to find money when required, and not busy themselves about its disposal. Can there be any doubt of this, when we look at the fact that our managing director, who went out to Brazil in the early part of the year, has already returned some two months, and we have not yet been called together to hear his report—this, too, in the face of the alarming accounts that are brought by each mail. We are told, moreover, that our Chairman has departed, forgetting to leave his address. But what is the use of complaining or asking for explanations? The directors at their own convenience will call us together, and that before long, when we shall have such information as they may see fit to impart to us, and be told that we shall have to subscribe more capital, or the whole concern must come to grief.—*Oct.* 3. A Shareholder.

RAILWAYS IN CORNWALL.

Sir,—I believe that the first railway, or *tramway*, laid down in this county was that between Portreath and the Poldice Mines. It is now the property of Sir F. M. Williams, Bart., to whom the works at Portreath belong. At the date of its construction (1808, I believe) it was required much more than at present—first, because there was no other railway connecting the Gwennap and Redruth mines with any port, whereas at present there are several such connections; and, secondly, because the mines to, or near to, which it extends are mostly idle. Poldice and North Treskerby Mines are now the chief mines supplied with coal, &c., over that line. In 1808 North Downs, and *many* other mines, were supplied through it. So lately as 1827 Treskerby, North Downs, Wheal Chance, Unity Wood, Wheal Unity, Wheal Gorland, Wheal Jewel, Wheal Damsel, &c., were at work; now they are idle. The carriages are drawn by horses. The West Cornwall Railway has a branch extending to Portreath from Carn Brea, over which coals &c., are carried to the mines in Camborne, Illogan, and Redruth. The West Cornwall Railway passes through the heart of the district.

I think that the next railway constructed in the county was that from St. Austell to Pentewan, a distance of about three and a half miles, for the conveyance chiefly of china-clay for shipment. This line is less used now than formerly, because of the Cornwall Railway, on which thousands of tons of clay are sent weekly to Par and Falmouth. I have heard within the last few days that Messrs. Martyn, the owners of extensive clay-works near St. Austell, are about to lay down a line of rails to connect their works with the Cornwall Railway at St. Austell. If they do that, nearly all the traffic will be diverted from the Pentewan line to that of the Cornwall. About the year 1825 a railway, called the Devoran, Redruth, and Chacewater Railway, was commenced, and soon completed. It extends from the port of Restronguet to Redruth, with a branch to Wheal Buller, &c.; length about nine miles; mineral and goods traffic only. Till about ten years ago it was worked by horse-power, now the work is performed by locomotives; it has been said that since the application of steam all profits have ceased, but whether it is so or not I cannot say. The branch intended for Chacewater was never made, and, I suppose, never will be. Traffic has fallen off immensely, consequent on the stopping of several (nearly all) of the Gwennap mines, principally the Consols, Wheal Clifford, &c.—very large concerns a few years ago.

In the year 1834 or 1835 an Act of Parliament was passed for constructing a railway between Redruth and Hayle, with branches to Tresavean, North Crofty, and North Roskear Mines, and Portreath, aforesaid. It was first desi gned for a good line merely, but in 1843 the late Mr. Crotch, of the Hotel, Hayle Foundry, obtained permission from the company to attach to the trains a passenger car, to convey passengers from Redruth to Hayle, and *vice versa*. Then passengers rode from Truro to Redruth, and from Hayle to Penzance, in omnibuses. The railway, ten miles long, was sold in or about the year 1845 to the West Cornwall Railway Company, for about 80,000*l*. That company made it a portion of their line, by avoiding the Angarrack incline (worked by a stationary engine) and the Penponds incline (worked by balance trucks). The Hayle Railway was worked by steam traction from the first. Mr. Crotch's experiment of passenger traffic succeeded so well that the late company very soon determined his license, and they then put on cars themselves. The first cars used were very much like prison vans, but after awhile better ones were provided. The first journey I took on the line was on June 24, 1843. The line was opened to Penzance about the year 1851, and to Truro about the year 1853, by the West Cornwall Company. A few years ago the whole line was leased for 1000 years to the Great Western Railway Company.

Also, about the year 1834, a railway was constructed between Bodmin and Wadebridge, as a goods line, but it takes passengers about once a-day, I believe, each way; the motion is a slow one, taking an hour to go eight miles. In the year 1844 or 1845 the Central Company, intending to get powers to construct a railway through the centre of the county, purchased the line. I believe that it is a very unprofitable concern. About the same time powers were obtained and exercised for the Liskeard and Caradon Railway, a mineral line, extending from that town to the mines in St. Cleer, &c. It is a locomotive line; no passenger traffic. From Liskeard the line extends to Looe. How far, or whether this line is profitable or not, I cannot say.

The late Mr. J. T. Treffry, of Placer House, Fowey, amongst other gigantic undertakings (for an individual), constructed a railway from Par to Roche (or nearly to Roche) for goods traffic. He also constructed a railway from St. Dennis to Newquay, and from East Wheal Rose to the same port, which is his property. These lines having lately been sold to the Cornwall Minerals Railway Company will become a part of their system, of whose works, and other railways, I intend to speak in a future letter.—*Truro, Oct.* 1. R. Symons.

CENTRAL VAN MINE.

Sir,—As the public seem utterly ignorant of this highly promising mine, it may not, perhaps, be amiss to put forward a few facts concerning it. Central Van is bounded on the north, south, and west by the great Van Mine, and on the east by the East Van Mine; it is, therefore, situate in the very centre of the rich deposits of ore which have been discovered in these two mines. It has been reported on in a most favourable manner by Mr. J. Roach, M.E., Henry Dennis, of the Snailbeach Mine, and Mr. F. Evans, who says in his report that "the Van lode and ore ground range from 30 to 60 ft. wide, the average value being about 40*l*. per cubic fathom," and adds, "You will have this lode in sinking your present shaft." Capt. Dennis says—"The new shaft in the Van Mine now sinking (called Seaham engine-shaft) is about 90 fms. only to the west of yours, and the levels eastward from Seaham shaft, towards you, are in a very rich vein of lead ore."

As an investment I verily believe it to be one of the most desirable in the market, and that it will pay most handsomely. The company is incorporated under the Limited Liability Act, with a capital of 50,000*l*., divided into 10,000 shares of 5*l*. each, whereas the Van Company is divided into 15,000 shares; Central Van will, therefore, only require to make two-thirds of the amount of profit the Van Mine is making to place it on a par with the Van. As to the management at the mine, I think it would be better if (instead of my crying it up) the reader would refer to the Supplement of last week's Journal, and read the very able report inserted therein by "J. C.," who will, I hope, continue to forward the various scraps of information he may from time to time obtain to the Journal, for the general information of its readers. Echo.

GREAT LAXEY MINE.

Sir,—I am, and have been for some time, a shareholder in the Great Laxey Mining Company, and I shall feel greatly obliged if you will kindly allow me to address a few words to my fellow-shareholders, through the medium of your valuable Journal.

In the circular addressed to us by our Chairman, and accompanying the notice of the annual meeting, the shareholders receive great credit for their forbearance, and, doubtless, it has been well deserved. But, in return for this forbearance, I think the shareholders have a right to greater confidence from the directors than to be simply informed that the strike continues, and that the directors have not been able to come to terms with the miners. I consider that the directors should have told us plainly how the matter stands, and what it is that prevents an agreement being arrived at. The men may be in the wrong—I hope they are; but it is also possible for directors to err, even if they do hold a large stake in the mine.

I consider, further, that we have just cause of complaint against the directors in again fixing upon Douglas as the place for the annual meeting. They profess to wish for the attendance of the great majority of the shareholders, and then practically put it out of their power to be present, unless they are in a position to give up three days for the purpose. Would it not have been wiser to fix upon London—or, perhaps, even better still, upon Liverpool.

In conclusion, I would earnestly exhort such of the shareholders as can make it convenient to attend the meeting to be guided solely by the merits of the case. Should the miners be shown to be exacting, and striving for terms which are not granted elsewhere, I would say support the directors, and fight it out to the bitter end. But if it should prove to be a question of wages, I would say bear in mind the state of the labour market, and the great increase that has taken place in so many articles of prime necessity. Remember that miners, too, as well as ourselves, must live, and treat them as we would have them treat us were our positions reversed. Or, lastly, should the want of agreement be caused by circumstances about which there is room for honest differences of opinion, I would say insist upon the matters being referred to arbitration. Let the directors and the men each choose one or more arbitrators, in whom they have confidence, and let both parties be bound by their decision. M. G.

Oct. 1.

WEST GOGINAN MINING COMPANY.

Sir,—Will the secretary and manager tell us, through your columns, the estimated value per fathom of the lode mentioned in the report sent to your paper last week? Has it been dialled? Can the manager say that it is the same rich lode that yielded so much wealth in the Old Goginan Mine? Has any miner acquainted with the lode in Old Goginan Mine seen it? I, for one, am content to wait, although it is so seldom we see a practical report from the manager, I hope my questions will be fairly received and replied to.—*Oct.* 1. A Holder of 100 Shares.

WHEAL BRITAIN.

Sir,—I wish to correct the errors contained in Mr. Phillips's letter of Sept. 11. In searching after reasons, or a reason, for my statement with reference to Capt. Pryor's title to the tin he thought that he hit the true one by supposing that disappointment was the reason; that, because he did not accept what I offered him, I was so bad-tempered as to vent my feelings in a letter about Wheal Britain. I think, Sir, that you will admit that there is nothing in that letter manifesting any bad temper; and I can truly state that I felt none, and that the circumstance of his inability to grant what he calls "a favour" was absent from my memory at the time. I deny my having solicited any favour. If I offer a person any article at a given price, and he buys it, he does not confer a favour unless he give more than its fair value; and if that person be either unable or unwilling to buy it it would be very absurd for the intending vendor to show bad temper about it: it is not usual either. What I offered Mr. Phillips was immediately accepted by a respected neighbour of his, so that there was not the slightest ground for any bad temper.

I infer from Mr. P.'s threat to go to law because of my statement about the tin, that he has arranged with Capt. R. Pryor as to it, of which the latter had a grant from the Duke of Cornwall prior to the lease to Mr. P. of the copper. If he has done so, he has acted like a wise man. But if the Duke's agents granted to Capt. Pryor what they had no right to grant no arrangement is necessary. It has been understood that the Duke and the lords of Tywarnhaile Tyas were the joint owners, in equal moieties, of the tin in the Manor of Goonearl, of which Wheal Britain is a part. It appears, however, from Mr. P.'s letter to you that the lords of that manor are owners of all the minerals therein. We shall see, by-and bye, who is in the right in this respect.

One would naturally infer from Mr. Phillips's letter that he conceived I had "defamed" his character, by stating that Capt. Pryor had a grant of the tin within Wheal Britain. He ought to learn the meaning of English words. He advises me very kindly; but what he means to insinuate by the words "inflexible principle" I know not, nor shall I trouble myself to enquire. Although he has lost a large portion of the capital he acquired abroad he has a good piece of mineral ground, and I wish him really great success in its exploration. If all those with whom I have been connected in business were so honest as Mr. Phillips, I should be about 5000*l*. better off than I am.—*Redruth, Sept.* 24. R. S.

REVIVAL OF MINING.

Sir,—Those to whom straw is a familiar subject own that it will show the way the wind blows. I know nothing myself of straws, but I think the fact of the resolution for the winding-up of Carzise Mine shows conclusively enough that the worst is past, and that Cornish mining will quickly revive. The ordeal has been a severe one, but, with the accustomed elasticity of British mining, it has been combated, and the patient still lives. Probably it will come forth soon "as a giant refreshed with wine." With a little more prudence another such reaction may, perhaps, in part be guarded against. A general opinion seems prevalent, too, that the high price of coals and labour has reached its acme. If so, as there is no standing still in such matters, we may expect soon to have both at reasonable rates. In the Roche district the writer is pleased to notice that the Brynn Mine has commenced re-working, so has Wheal Tregoss, where a sale of about 200*l*. worth of tin has been made, an angury of future profits. Ferdinand R. Kirk.

Birchin-lane, London, Oct. 3.

[For remainder of Original Correspondence see to-day's Journal.]

CLARE'S IRON SHOT-PROOF SHIPS, CONTRASTED WITH GUNS AND STATIONARY FORTS, ON NATIONAL GROUNDS.

The Emperor of Russia manufacturing and launching, in 1872, an iron ship on the banks of the Neva, upon the plans and designs furnished by myself to the British Admiralty, from 1853 to 1855, ostensibly to be used against his ports at Cronstadt and the Crimea, when war was raging between England and Russia, develops the Emperor's weakness in the summer solstice, when his shoal waters are navigable to shot-proof craft at 10 ft. draught.

Strange it is that the Emperor of Russia should have manufactured and launched at this time, just 19 years after the date of my patent for iron ship building for war purposes, an iron vessel, plated with charcoal iron, mounting four steel guns, to fire 700-lb. shot, the cost of which would be about 1500*l*. per volley, and totally useless against the sides of my ships, thus proving to the world, not only his own weakness, but the utter uselessness of his stone forts; and this irrespective of the fact that no gun yet made, or that can ever be made, to be used either ashore or afloat, would pierce the sides of the ship Peter the Great. In the Parliamentary Returns my correspondence during the Russian war contained some most startling facts, proved true by the effluxion in time, and to the eternal disgrace of the Admiralty. I name this now, as the Emperor of Russia has shown to the world that he must never again assume the dictatorial, under the belief that his forts and guns will be a protection. In confirmation of this I will state the plan I had in contemplation during the Russian war, to not only go up to St. Petersburg, but to bring him and Menschikoff to England. In July, 1855, I furnished the Admiralty with a drawing, per their order of June 22, 1855, and accompanying the same is the following extract:—"Such is my conviction of the efficiency of this mode of constructing gun boats, that they will sustain the fire of the Russian forts without being injured." At the end of November, 1855, I had an interview with Sir Charles Napier, at his house in Albermarle-street, when the plans I had furnished the Admiralty with per their order, and the plan I had worked out to blow up the stone bridge over the Neva, and get up to St. Petersburg, were laid before him—the admiral who promised Lord Palmerston, at public dinner, prior to his sailing for the Baltic, that "If he came down to his country he would show his lordship how they get young lambs in Hampshire." Sir Charles Napier told me that he wrote to the Admiralty from the Baltic for the very description of craft the plans fully represented, and that "If he had had such vessels as I had proposed to the Admiralty he would have been able to get to St. Petersberg, and not be, as was the case, kept below Cronstadt, with vessels drawing 25 feet of water."

In the Parliamentary Returns is a letter to Sir Charles Wood, under date Dec. 1, 1855, wherein is the following on the "gun and mortar boats" then being built:—"From their unsuitableness for present emergencies there can be but one opinion—they are not what England ought to have to tackle the Emperor of Russia's strongholds." * * * "On Thursday last I had a long discussion with Sir Chas. Napier, and as that gentleman's views coincide with mine as to what ought to be made, I can only again repeat that, in my humble opinion, it is only a waste of ti me and money to go on with such craft as those now building, so far as regards demolishing the Russian forts."

In a communication to Sir Charles Wood, of the Admiralty, dated Nov. 17, 1855, I said:—"If the Admiralty intend to attack the Emperor of Russia's strongholds in the Baltic next thaw with the vessels recommended by the *Times* a few days ago, that I can get built at Messrs. Peto, Betts, and Brassey's Canada Works, at Birkenhead, 50 to 100 gun-boats, to be ready for next year's attack on Cronstadt." * * * "The French gun-boats, from their description, correspond with the plans which I sent to his Imperial Majesty the Emperor of the French. His receipt of my plans, and his Minister of Marine's report to me, fully bear me out that they are identically my ideas."

Having gone thus far to show the Emperor of Russia's weakness behind stone

forts, that can be as easily split open by an iron vessel as a cabbage can be divided by a knife, I turn to the waste of the public purse by the British Government manufacturing not only iron coffins, of the *Captain* class, to murder, as that craft did, 471 human beings upon mal-hydrodynamics, but manufacturing vessels that are diving-bells, and upon which the committee on "designs for iron ships" have reported "unseaworthy." Also manufacturing 35-ton guns, at a cost of 16,000*l.* each, and firing them with 120-lbs. pebble, powder 700-lbs., shot at 200 yards, and the shots breaking up into fragments before a target manufactured upon the first plan the Admiralty obtained from me, per their order of June 22, 1855, on June 25, 1855, and from which the Bellerophon and succeeding iron ships have been constructed since 1865, just 10 years after the same had lain dormant at Whitehall as "not suitable for Her Majesty's service." Hence as such useless things afloat as 35-ton guns cost per shot 1000*l.*, it is palpable to me, if not plain to the British nation, that marine warfare with guns, &c., is of so costly a character to my ships proof to guns, &c., that I have brought to a minimum chance, and at a great distance of time, the certainty that Mr. Bright's creed is nearer being brought into vogue than it was at the commencement of the Russian war. This being the fact, and what the commercial and manufacturing trading communities of the world require, I appeal to my fellow-countrymen, whether they do not think that peace, with decreased taxation, is not nearer wealth and civilisation than either guns or ships made from iron puddled and rolled by Henry Cort's patents,* &c., and so mal-weighted from nescience as to be totally useless afloat.

As Henry Cort and the undersigned have proved ourselves to have been the greatest public benefactors extant, and the greatest civilisers of the world, and both of us robbed of our property by the dishonesty of Government officials, it is to be hoped in my case that the British nation will never let the injustice done my family by Government officials brand them, as in Cort's case, with base turpitude. And, in conclusion, the Government that cannot upon principle be honest, and do the thing that is right, to an individual certainty cannot do it to a nation, that is let in for upwards of 70,000,000*l.* a year direct and indirect taxation, 20 per cent. of which goes in plunder and peculation, Baxter's mixture being neither overlooked nor forgotten. To wit, the Gambier and Rumble indictment, with 18 months hard labour; and the stewards at Portsmouth on the butchers' contracts.

Need I say more, and can the British nation do less than uphold "fair play, a clear stage, and not favour," to—

JOHN CLARE,
The Inventor, Patentee, Designer, Promoter, and upholder of England's Iron Shot-Proof Ships since 1853.

London, Sept. 26.

* The wealth accruing to the British nation, and more directly to the millionaire ironmasters (Crawshay alone, seven millions), from Henry Cort's patents in the manufacture of iron is at least one and a half billion pounds sterling, which is about 50 per cent. more than the present National Debt of England.

THE COPPER TRADE.

There has been, if possible, greater depression this week than last. Consumers cannot sell, and, therefore, will not buy unless something comes before them at a low price. The demand for Chilian slab has been the sole mainstay of the market, with sales of about 1500 tons at 83*l.* to 84*l.* 10s. ordinary to best brands, and with extended prompt at 84*l.* to 85*l.* Australian has continued a drug, and transactions unimportant. Had there been any real pressure to sell this description lower prices must have been taken to compete with the second-hand parcels of tough cake and best selected, offering at 2*l.* to 3*l.* below smelters' official rates, and in some cases even lower still. The demand for manufactured is still limited. The annexed statistics are not encouraging, though, even if the final 15*l.* of the rise last spring were due to over-speculation, there is still a large and serious fall to be accounted for. It is not surprising that our imports and stocks have lately increased, though shipments from various parts of the world to Europe, in the effort to take advantage of such high prices, but it is impossible that this may prove such a displacement of stock as to create a vacuum to be filled up hereafter. Meanwhile the outside causes already mentioned have a greater importance than statistics on the immediate future of the market.

The cablegram from Chili, in advance of the mail of Sept. 2, advises charters for the fortnight of 1040 tons of pure copper—340 tons in bars and ingots and 700 tons pure in ores and regulus. On the 1st inst., at the Swansea Ticketing, 2126 tons of ores, averaging 18½ per cent., were sold at an average price of 15*s.* 9½*d.* per unit.

According to the Board of Trade Returns for the United Kingdom, the imports and exports of copper during the first eight months of the following years, estimated in fine, were as follows:—

		1872.	1871.	1870.
IMPORTS:—	Copper in ores and pyrites ..Tons	14,628	12,430	13,051
	Ditto, regulus	10,495	9,378	14,702
	Ditto, bars, &c.	31,489	22,050	17,511
	Total	5,6612	43,858	45,264
EXPORTS:—	Manufactured copper, &c....Tons	12,203	14,806	19,294
	Unmanufactured ditto	9,606	8,980	7,554
	Foreign ditto	6,659	10,089	11,052
	Total	28,438	33,875	38,500

The Swansea and Liverpool arrivals and deliveries of Chili bars, ores, and regulus in fine, were as follows:—

	Sept., 1872.	Sept., 1871.	Sept., 1870.
Arrivals.....Tons	2450	2700	5250
Deliveries	1100	5900	2300

The quantity of Chili bars, ores, and regulus in stock at, and afloat for, Liverpool, Swansea and Havre, and of English and foreign copper in London, is thus estimated in fine copper:—

	Oct. 1, 1872.	Oct. 1, 1871.	Oct. 1, 1870.
Stock.....Tons	28,745	24,961	32,191
Chili produce afloat and chartered	12,250	10,600	13,200
Total	40,995	35,564	45,391
	Oct. 1, 1872.	Sept. 1, 1872.	Aug. 1, 1872.
Stock	28,745	27,522	27,433
Chili produce afloat and chartered	12,250	12,250	11,700
Total	40,995	39,770	39,133

Quotations of English tough and Chili bars, ores, and regulus, were as follows:—

	Oct. 1, 1872.	Oct. 1, 1871.	Oct. 1, 1870.
Tough.....Ton	£91 0 0	£74 10 0	£69 0 0
Bars	82 10 0	68 0 0	62 0 0
Ores and regulus...Unit	0 16 0	0 14 0	0 12 3

The actual exports of bars, ores, and regulus, in fine copper from Chili during the first seven months of 1872 were 29,200 tons; 1871, 22,300 tons; 1870, 32,300 tons. —VIVIAN, YOUNGER, AND BOND.

COPPER—(J. Pitcairn Campbell and Co., Liverpool).—The business during the fortnight consists of about 3000 tons bars, principally on speculative account, at 91*l.* 10s. down to 80*l.* per ton. At the Swansea sale 2393 tons of ore, average produce 17 per cent., realised an average price of 16s. 3d. per unit. Arrivals here during the fortnight of West Coast, S.A., produce:—Iron Crown, from Valparaiso, 50 tons regulus and 50 tons bars; Atahualpa, from Caldera, 80 tons bars; Cuzco, from Valparaiso, 320 tons bars, 140 tons ingots, and 140 tons Barilla. At Swansea, Edgar, from Lota, 600 tons bars and 584 tons regulus. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, are—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool.....	—	80	13,070	950	140
Swansea	16	2498	5,530	100	—
Total.....	16	2578	18,600	1050	140

Representing about 21,000 tons fine copper, against 17,400 tons Sept. 30, 1871; 21,700 tons Sept. 30, 1870; and 16,500 tons Sept. 30, 1869.

COPPER.—Nothing done in furnace material by private contract, as owners are refusing to sell at quotations. The Swansea Ticketing for ore on the 1st inst. went off at an average of 15s. 9d. per unit, the average produce being 18½ per cent., but Cape ore averaged 16s. 1d. per unit. From and including Friday last about 1900 tons bars have been disposed of, nearly the whole of which was on cash terms. Good ordinary brands realised 83*l.* to 84*l.* cash, 84*l.* to 85*l.* with prompts ranging from one to three months; Urmeneta, being rather scarce, was sold at 83*l.* 10s. and 84*l.* cash, and the bulk of the purchases in this brand were made by consumers, who have also paid 85*l.* for Walker and J. Edwards; these last two marks are very difficult to obtain, and, in fact, it may virtually be said that there none offering, the transactions being confined to stray lots which turn up from time in speculative hands. The telegram from Chili come to hand on Sept. 27, and advised charters for the last half of August as 1040 tons of fine, of which 200 tons in bars and ingots, and 700 tons in ores and regulus, were for England, and 140 tons in bars for Havre; the total for the corresponding period last year was 4594 tons fine. The stocks on the coast (including one month's estimated make) are now given as 3750 tons, against 7000 tons. The charters as advised by telegram compare as follows:—Jan. 1 to Aug. 31, 1872, 30,550 tons; same period of 1871, 29,300 tons.

Although actual shipments for the present year show a much greater increase during the said months the stock in Chili met with nearly a corresponding reduction, having fallen from 10,750 to 3750 tons, whereas last year they increased 1000 tons during the same period. Taking, therefore, the charters as representing the actual produce of the country, and allowing for the differences in stock, it would give—Production in Chili, Jan. 1 and Aug. 31, 1872, 23,550 tons; 1871, 30,300 tons; or a decrease in the the out-turn of about 22 per cent. The price of bars in Chili, on Sept. 3, was $22 per quintal, or equal to 101*l.* 15s. laid down in Liverpool, less usual discount and brokerage, but without any commission on either side. Sales of Australian have been but small, and ranged from 91*l.* down to 89*l.* 10s. for Wallaroo cake, the market closing steady at an improvement of about 10s. per ton from the lowest point. English is steady, and a fair business doing in raw sorts, of which smelters are not free sellers unless able to cover their sales by corresponding purchases.—JAMES AND SHAKSPEARE.

PRICES OF MATERIALS

As charged at the PROVIDENCE MINES during the following months:—

Description.	May.	June.	July.
Common iron .....per cwt.....	13s. 6d.	—	—
Hoop ditto ..... ,, ...	18 0	—	—
8 in. patent nails ..... ,, ...	20 6	—	—
4 in. ditto ..... ,, ...	21 0	21 0	—
3½ in. ditto ..... ,, ...	—	22 6	—
3 in. ditto .....per 1000.....	5 3	—	—
White lead .....per cwt.....	24 0	22 0	—
Tallow .....per lb.	1 6	—	—
Baltic timber .. ..per foot	1 3	—	—
Norway ditto .....per load.....	40 0	—	—
Longsound ditto .....per foot	0 9	—	—
Balk ditto ..... ,, ...	0 9½	—	—
M. C. coals.....per ton	17 6 / 18 6	18 6 / 19 3	18s. 6d.
Best candles*† .....per doz.....	5 9	5 9	5 9
Tallow† .....per cwt.....	—	48 0	48 0
Powder† .....per 100 lbs...	42 0	42 0	—
Safety fuse† ..... per coil	0 4	0 4	0 4
Rope† ..... ,, ...	42 0	42 0	—
Hempt ..... per lb.	0 5	—	—
White yarn† ..... ,, ...	0 5¼	—	0 5¼

* Registered red wick, burn 3½ to 4 hours. † Delivered free of carriage.

GREAT WORK CONSOLS.—Mr. John Kendall, jun., has been appointed purser, in the room of the late Mr. T. P. Tyacke.

Royal School of Mines, Jermyn Street.

[FROM NOTES BY OUR OWN REPORTER.]

LECTURE LIII.—We have seen (continued Mr. SMYTH) that spontaneous ventilation arises from natural causes of the simplest character, and that in many cases it is a great help to artificial ventilation, and now we will consider the means by which the latter is carried out. They are numerous, but may be divided into four classes—1. Furnaces.—2. Jets of water or steam.—3. A series of contrivances like air-pumps.—4. Fans.

1.—The FURNACE is the most usual in our collieries, there being the greatest convenience and readiness in its arrangement, and the greatest amount of ventilation produced by its means. In Durham and Northumberland, where it has long been in use, its application has been remarkably free from accidents, considering the large quantity of coal raised there. Formerly, in the Midland districts, when the air is very heavy just before a storm, or at the Equinox, it was the custom to suspend a pan of burning coals in the shaft, lowering or raising it by a windlass. The effect produced was to destroy the equilibrium between the upcast and downcast shafts, and thus set the air in motion. Although useful for temporary purposes, its application was unsatisfactory, because it had to be raised every time the fuel burnt out. In order to avoid this necessity, regular furnaces were put in near the top of the shaft, or in a cupola or stack at the summit. It was, however, soon found to be far better to have the fire at the bottom, and thus by heating the whole column of air in the upcast shaft the equilibrium is more completely disturbed, and a rapid and powerful circulation is obtained. In extensive collieries, however, it is necessary to establish a proper furnace. This system, which is often carried out on a large scale, is at present the most effective yet known, no less than 120,000 cubic feet per minute being passed in some cases—as, for instance, at the Monkwearmouth Colliery, where the furnace is 12 ft. in width, with 3 ft. above and 3 ft. below the fire-bars. It is placed usually, accordingly to circumstances, at from 20 to 40 ft. from the bottom of the shaft, generally in the plane of the seam, with great precautions to prevent the coal taking fire. When there are large quantities of gas present the air from the mine is prevented altogether from passing through the furnace, but is conducted up an inclined drift, opening at 40 or 50 yards higher into the shaft, called a "dumb drift." In cases of this kind the fresh air necessary for the combustion of the furnace is introduced into the mine from the surface. In managing a furnace a very important point is to have a very thin fire, which is maintained by small quantities of fuel being thrown on at a time. Nothing is more wasteful than the practice of throwing thick masses of coal into the furnace, producing for a long time nothing but smoke until it bursts into a flame. Smoke is the evidence of a bad combustion, and this, therefore, is a most important point both as to the quantity of fuel consumed and amount of heat produced. It is, however, not an easy thing to get careful and intelligent firemen, and their work even in the best collieries is often much neglected. If the fire is well kept up an average temperature of from 140° to 160° Fahr. may be obtained, which, compared with the temperature of the downcast shaft, will give a ventilating power of from 80° to 100°. In this way it is calculated what is the amount of air moved for a certain amount of coal consumed, and also the effects of a furnace against the machinery moved by steam-power. A furnace has the decided advantage, to begin with, of being easily attended to, and not likely to get out of order, although it may not be so economical always as the better kinds of machinery. One objection to the common furnace is that if a furnace of a certain size is put in we cannot afterwards increase the amount of combustion, and, therefore, the amount of ventilation. To obviate this the late eminent viewer, Mr. Wales, suggested an arrangement, which was afterwards completed by Mr. Dagleish, for making the bars of greater length, so as to permit either the shifting of the place for the fire so as to allow that part to be cleared without altering the ventilation, or to permit of a vast increase in the fire, whilst by a series of doors the air was regulated either above or below the fire-bars. There are other modifications and improvements more or less adapted to the present time, and a very much larger amount of air can be passed in that way than by any machinery. The amount usually moved by three furnaces playing into one upcast shaft, 16 ft. in diameter, is about 200,000 cubic feet per minute.

2.—About the year 1848 or 1849 Mr. Goldsworthy Gurney proposed to replace the furnace by JETS OF HIGH-PRESSURE STEAM. Some accidents about that time having been attributed to the admission of the return air to the furnaces, a Committee of the House of Commons took up the matter, and experiments, carried out at the Polytechnic, were said to prove that the jets of steam, acting powerfully on the *vis inertia* of the column of air in the shaft, drove the air upwards, and produced a powerful ventilating movement. The Parliamentary Committee were astonished to find that practical miners did not accept those experiments as conclusive. They pointed out that what might do very well in small pipes might be utterly futile and ineffective in a large shaft. The leading mining engineers determined before they submitted to a clause in an Act of Parliament making the use of these steam-jets compulsory to try experiments in the pits themselves. This was done at the Seaton Delaval and at other pits by Mr. Nicholas Wood, Mr. T. E. Foster, and others. On trial the single jet was found to be all but useless, but better results were obtained with a network of steam piping, giving out at their intersections a number of small jets. Each jet was made to work into a cylinder of sheet-iron, and the air was driven up violently, being propelled simply by mechanical force. With one jet 4 in. in diameter 17,000 ft. of air were moved per minute; with ⅜ in. jets about 1 foot apart 22,000 cubic feet of air were passed. The steam, however, was brought down from the surface by iron pipes into a reservoir at the bottom, which supplied the jets, and by this means the temperature of the shaft was raised from 99° to 103°. When jets 3-16ths of an inch were used the quantity of air passed diminished. When the furnace was lighted up and acted with the jets a large quantity of air was passed, but the addition to what the furnace would do without the jets was practically inappreciable. Besides their comparative inferiority jets have also the disadvantage of requiring for their action the whole of the shaft. In 1854 it was seen, however, that steam-jets were of great use under certain difficulties arising from an explosion.

Jets or falls of water have long been used in our mines. If water falls into a shaft it beats down the air before it, and cools it also. If, therefore, in a pit there should be an explosion, producing a total stagnation of the air, and consequently a necessity for the production without delay of a current, it is expedient to throw a quantity of water down the shaft, and this method is most invariably adopted after accidents which render it inexpedient to light the fire or ventilate by ordinary means. A considerable influx of this kind may be felt for hundreds of yards from the pulsation of the air. In the same way a large bucket-cage, passed up and down with rapidity, will set the current in motion, or on the contrary it may stop it. Expedients of this kind, however, which may be beneficial in some cases, and dangerous in others, must be used with discretion. In some parts of Europe a fall of water is used for the purpose of conveying a blast to the furnace. This is the case in the Southern Pyrenees, where the air is carried in with the water, and passes into a square box, from which it escapes through an orifice in the side, and is led by a pipe to the furnace, while the water flows away at the bottom. The great advantage of an arrangement of this kind is its simplicity and inexpensiveness, and it throws a pleasant coolness into places where the ventilation is imperfect.

3.—There are a great variety of ventilating machines, which go by the general name of AIR PUMPS. Many of these, although introduced as novelties, may be found in the oldest works on mining, and in the ancient book of Agricola there are a considerable number described and drawn. These, however, are only applicable to small portions of the workings, the air being driven in through a nozzle of no great diameter. They are kept to this day on the Continent for occasional use under particular circumstances. The idea, however, of employing large air-pumps—that is to say, pumps of considerable calibre—was first brought into something like a perfect plan in the Belgian mines, and on a smaller scale in some of the mines in Germany. About 40 years ago machines of this sort were constructed with large cylinders, from 4 to 8 ft. in diameter, made either of cast-iron or wood, to which was fitted a sort of piston, fixed on a suitable frame. This piston being suspended by a chain from the extremity of a lever or beam, a large clack opens inwards from the top with a small weight to counterbalance it. This being placed over the shaft or intake, the action of the piston alternately closes and opens the valves, and so forces into motion a large quantity of air. The great objection to this machine is the amount of friction: but this was the first real step towards ventilating collieries by apparatus of this kind. In the Hartz mines they have an engine (known also in England as a "duck machine"), which consists of an outer box, with an inner cylinder fitted with valves, and attached by a set-off to the pump-rods, which work up and down the shaft. It has the advantages of being established at an extremely small cost, of requiring very little repairs, and of throwing a large body of air into the workings. It is most useful in metalliferous mines, where they do not require a large quantity of air, but where it is necessary to sweep out foul air from what are called "close ends." Great exhausting cylinders, constructed on a similar principle, were employed at the Mont Cenis Tunnel to draw out the dust and gunpowder smoke, and thus assisting the pushing out apparatus. M. Mahaux, of Belgium, in 1861 patented a horizontal movement to a machine of this description, lying on a proper foundation near the opening of the upcast, with a stroke of 9 or 10 ft., which was found capable of doing excellent work, bringing out 45,000 cubic feet per minute. Two modifications of the most valuable kind came out almost together in England. The first, and it is an admirable one, is the double-acting ventilator of Mr. Struvé, of which there are several admirable examples at work in South Wales. The piston has a 6-ft. stroke, and is from 16 to 24 ft. in diameter. The piston works up and down in water, and by means of valves ranged above and below, placed on the walls of the piston chamber, air is drawn in and forced out at each up and down stroke. The simple manner in which this works is a great advantage, but a great deal of care is necessary to keep the valves in order. At the famous colliery at Risca there is one of these machines, which has two pistons, each 18 ft. in diameter, with a 6 ft. stroke, worked by a small engine 35 lbs. to the inch, by which 43,000 cubic feet of air are passed every minute. Beyond all these in magnitude is Nixon's ventilator, of which there is a fine example now at work at the Navigation Colliery, at Aberdare. The pistons are 30 by 22 ft., so that they have, in fact, an area each of 660 ft., and that a body of air is pushed to and fro by a 7-ft. stroke, so that the velocity of the air may be readily calculated. The valves are 672 in number, and rectangular in shape, being 16 by 24 in. Worked at the rate of nine strokes per minute, the machine would expel 166,000 cubic feet of air per minute. An allowance, however, must be made for a good deal of loss by friction and leakage.

4.—We will next pass to the consideration of some of the FAN ventilators now largely employed in mines. If we look once more at Agricola we shall find that the ancient German miners were well up in the use of fans. They were, however, simply a series of radial vanes, and they have been employed a good deal up to the present time in the West of England metallic mines. Fans have also been employed in coal pits both to drive in fresh air and to draw out the returns. A well-known Northern engineer brought forward a proposition to employ simple fans on a large scale, and on trial they were found to do good work, but they were not at all able to compete with the furnace in dangerous mines. One of the principal drawbacks to the use of these fans alone would be that by any accident which would impede the high velocity necessary for producing a strong current, the ventilation would be lessened or stopped altogether, and there was, moreover, very considerable loss of power by the escape of the air between the vanes. This was sought to be overcome by giving the vanes a different shape: and Mr. Brunton proposed that the fan should be put up at the top of any upcast pit. Another plan suggested was that of admitting the air at the centre of the fan, instead of at the sides, and a contrivance of this kind by Mr. Waddell, of Llanelly, met with some success. One of the most important applications, however, of the fan principle is that by a German engineer, named Guibal, who erected several fans in the Belgian coal field, varying from 24 to 27 ft. in diameter, and 8 to 10 ft. in breadth, like a great water-wheel, and there are several now at work in the Newcastle district of from 20 to 40 ft. in diameter, and 12 ft. in width. One of the latter dimensions is doing good service at Whitehaven; and there are others of the largest size in South Wales. Besides much simplity and strength in the construction of the fan part, it offers some advantages in respect to the orifice through which the air has to pass in leaving the fan, which, being a trumpet-shaped chamber or stack, allows it to expand as it goes out. Another advantage is that it is not necessary to work at a greater speed than 10 to 16 revolutions per minute, and passes a quantity of air once thought impossible of attainment by any mechanical means of this kind—say, 40,000 cubic feet per minute. At several places a double engine has been put up to work the fan—that is to say, one to relieve the other—and with this precaution the Guibal fan is one of the most satisfactory introduced into mining operations. There are others, however, which strongly compete with it. One, for instance, by an engineer named Lambert, with a series of radial vanes 18 ft. in diameter, like Waddell's, which is doing good work, and another by Colson. An engineer named Cook, of Liverpool, has brought out an ingenious ventilator, which is now made on a considerable scale. It consists of two drums, one 8 ft. in diameter, working within the other, which is 12 ft., and is capable of passing an enormous volume of air. The Americans speak highly, also, of "Rook's blower." It is largely employed, not only in the older States, but in Nevada, and is said to be working well and effectively. There are two others that require especial mention—Lemielle's and Fabry's—but we must defer them until the next lecture.

MINERS' ASSOCIATION OF CORNWALL AND DEVON—A GOOD EXAMPLE.

Mr. ROBERT HUNT, F.R.S., the founder and honorary secretary of this association, has recently received a very gratifying letter from a former pupil of the association, from which we give the following extracts to show that the sentiment of gratitude is not quite extinct, as an inducement to others who have similarly benefited by the teaching imparted in the classes of the association, and as an encouragement to its present members to persevere in their efforts after improvement:—

Carrangara Mine, Guyong, New South Wales.—To Professor HUNT—DEAR SIR: Please find enclosed Post Office order for 1*l.* as a small contribution to the Miners' Association of Cornwall and Devon. At some future time I will remember you again with another amount. Now I must tell you who I am, and the reason for my sending you this small contribution. I am one of St. Just, Cornwall, and joined the association just as it first started, although I had near four miles to walk to its meetings, and I distinctly remember you saying to me one evening. "It is hard on you, but we cannot bring it to everyone's door." Well, Sir, I plodded on, and in a short time I had a situation offered to me in the St. Just United Mines, afterwards known as the Amalgamated, which situation as mine agent I filled for seven years. Then I engaged with a Mr. Walter Friend, of Sydney, for five years (two and a half of which are expired), to manage a copper mine of his, known as Carrangara. Previous to my coming there was a large sum of money lost in this mine by a company through bad management, which had such a depreciating effect on the property that Mr. Friend bought it for 700*l.*, and now he can make 30,000*l.* of it. His success has given him confidence in mining, and also in members of the association as mine managers, and he told me last week he would write you by this mail to get out a batch of (say) 10 or 12. He could find a place for each of them if they were here now in the gold, copper, or tin mines: he is largely interested in all these. I may say a good tin miner will make a good gold miner, as the treatment of the stone is very similar in both cases. Mining in this colony was very much neglected till within the last twelve months, but now there is a great excitement for it. Mines are springing up in all directions, and there is a great lack of the right sort of men to manage them, and, consequently, there will be a tremendous waste of money. In our mine I have discovered gold in paying quantities, and have taken up as much as 10*l.* worth of it in a cup full of copper ore. There was none found here before, although the mine is situated within twelve miles of Ophir, where the gold was first discovered in the colony, and we are situated at the head of the same creek. Since I made this discovery I have also been appointed manager of a gold mine, about six miles away. In this gold mine the gold is found under very peculiar circumstances in a lode very "foul" with marcasite and the different pyritous minerals, running between serpentine and a porphyry rock, the underlie of the lode being underneath the serpentine. This may not be new to you. Will you kindly let me know if such a thing is common in gold mining. Other gold mines in the colony are productive under precisely the same circumstances that tin mines are at home. Copper has not been worked for at any great depths in this colony, but the surface branches are found almost invariably at a point where the lode crosses a hollow in the side of the hill at right angles, and particularly if an elvan course is near to it. Near the surface the lodes are composed of green carbonates, and as we go down it gradually blends into blue, then we came to what is known here as tile ore, then grey or vitreous, and underlying all is the black and yellow. With regard to the tin mines in the north of this colony, I cannot say much about them. I have had several samples from them to assay, but I have not yet seen a stone of tin from a lode that came from there, but it is said the streams are very productive. I must apologise for intruding on your valuable time by writing such a long, and I fear uninteresting, letter, but allow me to state, Sir, I hold my present position in life to your exertions in bringing the Miners' Association, with all its advantages, to St. Just, and I feel I should be very ungrateful if I did not acknowledge it to you.—WILLIAM WHITE.

This letter shows what a demand there is for trained students abroad, but they are quite as much wanted at home, and many of the students of the Miners' Association now hold positions of trust in various parts of Cornwall, Wales, Cumberland, and other localities, and it is to be hoped that such persons will do all in their power to aid so valuable an institution, as a recognition of what it has done for them.

THE ROYAL PRUSSIAN SMELTING WORKS.

Dr. WEDDING gives an interesting account of improvements and experiments made at various Prussian smelting works, &c., in 1870, relating to the production of pig-lead; the desilverisation of lead; the copper works; and the manufacture of sulphuric acid.

UPPER HARTZ SMELTING WORKS.—The construction of the furnaces for smelting lead ore is described. Use of hot-blast, by which it was found that no saving was effected in the amount of fuel used. It also was found that the slags produced by smelting the ore and lead matt could replace the copper slags hitherto used, brought from the Lower Hartz.

In regard to the treatment with abstrich, it appears that the Lautenthal Works, instead of adding to the abstrich as a flux to the lead matt process, by which a lead very rich in antimony was produced, it was smelted with unroasted, and consequently very sulphurous, lead matt. The product was a lead sufficiently free from copper and antimony, and worked very well in the zinc process for desilverisation.

LOWER HARTZ SMELTING WORKS.—The most essential improvement at these works consists in the utilisation of the sulphurous acid. When roasting in furnaces, only one-fifth as much zinc sulphide is formed as when roasted in open heaps; and in order to diminish this, and to overcome the disadvantage of having rich slags, when much zinc sulphide remains, the ores are allowed to weather at the Julius Smelting Works in the open air; dilute sulphuric acid being added, and the zinc sulphide thus formed then washed out.

FRIEDRICHS SMELTING WORKS (Tarnowitz, Silesia).—In consequence of the large amount of relatively poor ores, often containing zinc, delivered at the works, a different mode of treatment is adopted. The richer pulverised ores, containing 40 to 50 per cent. lead, undergo a combined sintering and smelting process, in reverberatory furnaces, so performed that with the sintering is combined either a precipitation process by iron, or a reaction process by carbonate of lead, during which a considerable amount of zinc is carried over as oxide. The precipitation process was formerly carried on with metallic iron, but iron finery-cinder gave higher results. However, successful experiments were made to form the charge of galena and cerusite. With a charge of 30 cwts. galena to 10 cwts. cerusite, 15 to 24 per cent. of lead has been produced. The residues were treated in blast-furnaces, together with the residues obtained from sintering the poor ores. In consequence of the advantageous addition of unroasted lead matt, for the removal of zinc in some of the operations at Freiberg, experiments were made by the addition of the same to ore rich in zinc in reverberatory furnaces. The charge became viscous and retained the separated lead, and the volatilisation of this metal was considerably increased, without any essential diminution in the amount of zinc. The poor ores, which do not contain more than 40 per cent. lead are sintered in long reverberatory roasting furnaces to prepare them for the subsequent smelting in blast-furnaces.

With reference to the smelting in bast-furnaces, it is noted that the shafts of the furnaces increase upwards, coke is used, and fuel and charge are placed in the furnace in alternate layers. With these furnaces the slags are poorer, and metallic iron can be dispensed with, as a sufficient amount is reduced from the iron finery-cinders to combine with the sulphur.

COPPER WORKS.—At Altman an argentiferous black copper is produced, which is refined, granulated, and treated with dilute sulphuric acid. The lye is treated for cupric sulphate, after being filtered off the silver. An essential improvement is the filtration of the hot lyes, through granulated lead and copper, with the addition of common salt, while they are being transferred from the evaporating pans to the crystallising vats. The greater part of the silver carried off by the lye is thus saved, and the total loss reduced to 2 per cent.

MANUFACTURE OF SULPHURIC ACID.—At the Altenau Works the lead matt is roasted in killas, and the gases are used for the manufacture of sulphuric acid. The sulphuric acid is carried by a pipe from the lead chamber on one side of the valley, to the vitriol works on the other, and all necessity of transportation is thus avoided. At the Saiger Works, the sulphuric acid is freed from arsenic in a Goritenhofer tower. This is a quadrangular apparatus of wood, 24½ feet wide by 5½ feet broad, lined with lead, on the inside of which are pieces of wood having a triangular section also covered with lead, on which last the acid drops down as in terraces, while a current of sulphydric acid ascends. This apparatus completely answers its purpose. A Gay Lussac apparatus is employed, with consequent diminution in the amount of saltpetre used.—*Mechanics' Magazine.*

THARSIS SULPHUR AND COPPER COMPANY.—The mechanics of the Tharis Sulphur and Copper Company, Tyne Works, Hebburn, held their first annual dinner at the Staith House Inn, Pelaw Main, on Saturday. Mr. Beauchamp was unanimously called on to preside, and Mr. Robinson to occupy the vice-chair. Mr. Armour, one of the oldest servants of the company, was called on to give the toast of the evening, "Success and continued prosperity to the Tharsis Sulphur and Copper Company." It was drunk with enthusiasm, and three hearty cheers for the continued prosperity of the company. Mr. Forster proposed "The manager, cashier, clerks, and workmen of the company," which was drunk with musical honours. Toasts of a complimentary description were given by the Vice-Chairman and Mr. Glen Wright.

LONDON GENERAL OMNIBUS COMPANY.—Traffic returns for the week ending September 29, 9333*l.* 6s. 3d.

Meetings of Mining Companies.

WHEAL PEEVOR MINING COMPANY.

The quarterly meeting of shareholders was held at the account-house, on the mine, on Thursday, Sept. 26,

Mr. Francis Reed Wilson in the chair.

Mr. Thomas Pryor (the purser) read the notice convening the meeting and the following statement of accounts, showing:—

Labour cost paid to Aug. 30	£1149	3	3		
Merchants' bills, three months	643	15	3		
Lanyon and Son, half-cost of 60-in. engine	270	0	0		
Discount on calls for prompt payment	60	0	6		
Balance from last account	348	18	10=	£2471	17 10
June 11, 1872.—By call of 10s. per share	£1500	0	0		
Tin sold	83	18	0=	1583	18 0
Leaving a debit balance of				£ 887	19 10

The Chairman said he had no idea he should be called upon to take any part in the proceedings at the meeting, but, being in the county on other business, had merely attended it as a private shareholder. He certainly must, however, say that when he saw the amount of work that had been done in so short a time he felt rather surprised, and was sure that great energy and ability had been displayed by their agents and engineer of the company. Everything at the surface appeared to him to be in a very forward state, and, judging from the large quantity of tinstuff at the surface, he could not help thinking that equal energy had been used underground, and he had no doubt whatever that as soon as they were in a position to stamp their tinstuff returns of a pretty large amount would be made. He bought his shares at a rather high price, but he had the greatest confidence in the value of the property, and should now be able to add to his interest on what he considered very favourable terms.

The Purser said that when the prospectus of the mine was issued it was stated that for about 6000*l.* the mine would be drained, and a large amount of tin ground would be available for stamping. As far as he was able to judge, he saw no reason for thinking that the amount would be exceeded, which he thought proved that the estimate of expenditure had not been hastily gone into, but with deliberation and care. (Hear, hear.) As far as the returns were concerned, the mine so far had exceeded the expectations of everyone, and they were called upon to commence stamping tinstuff much earlier than he expected. He believed he had before mentioned that his late uncle intended some years since to have worked the mine, and, with another gentleman, made an offer of 6000*l.* for the sett. There were, however, at that time difficulties in the way, but as soon as he (the purser) saw the way clear he lost not a moment in securing the ground, which, through the kindness of Sir Frederick Martin Williams, Bart., M.P., he very soon obtained. The worthy baronet, however, retained a large interest in the mine, for which he sincerely hoped he would be amply remunerated.

Mr. Dabb said he very well recollected about 23 years since coming to Wheal Peevor with the late Capt. Richards, of Wheal Basset, who had a very high opinion of the mine, and who was at that time very desirous of acquiring the property. He found, however, that there were such difficulties in the way that he, after a considerable time, very reluctantly gave up the idea of getting it. The sett had been locked up from that time until recently, as their purser had stated; but he was happy to be able to state, from his own knowledge of the feelings of some of the largest shareholders in the mine, that now it had been so successfully started they were determined to carry it out with every energy and with determination. (Cheers.) He had not been on the mine since their last quarterly meeting, but could not help feeling some surprise at the large amount of work that had been accomplished. (Hear, hear.)

Capt. Rogers (the manager) said he felt much pleased with the manner in which their efforts had been mentioned, and he could assure them, with the able assistance of Capt. Pryor, the resident agent, who was at the mine both early and late, and who was indefatigable in his exertions, they should continue to make quite as good progress as they had hitherto. In fact, the whole of the staff felt the necessity of getting as much of their surface work done as possible before winter sets in. The prospects of the mine were highly encouraging, and he certainly never expected to have seen such a good lode as they now had in the engine-shaft; it was worth more than 50*l.* per fathom, and was opening out stopes of equal value. There was now at surface about 5 tons of tin in the stone, and before another meeting he hoped to see a considerable amount to the credit of the mine for tin sold. (Hear, hear.)

Mr. F. Michell, the engineer of the company, said he had known Wheal Peevor for several years, and as soon as he found there was a possibility of obtaining the sett the purser and himself lost no time in making the application for it. It was a very long time since the mine had worked—some 70 or 80 years—and at that time the whole of the tinstuff was drawn to surface by horse-power, and carried on mules' backs to water stamping-mills, some three or four miles distant, and was all dressed by hand labour. Of course this was a very different mode from that now pursued, and it was only rich mines even in those days of cheap labour that could afford to pay the costs of such expensive mode of working. By referring to a most admirable mining survey made more than 50 years since, which had come into his hands, he had acquired considerable information respecting the property; the details had been very fully and minutely gone into, giving more information of a really practical character than he had ever seen elsewhere of this or of any other mine. So far everything had been found precisely as the old plans, with the marginal references, had stated, and he had not the slightest doubt that the rest would also be found equally correct. The lode varied from 10 to 20 ft. in width, and some of the tinstuff raised was as rich as any tinstuff in Cornwall. He had no doubt that as soon as the mine was drained and fully developed they would be in a position to return 20 tons of black tin per month. The known extent of their tin ground was 120 fathoms in length, the greater portion of which has been worked by the old company as far as their imperfect means would enable them to do. Some little doubt had been raised as to their present pumping machinery being adequate to the requirements of the mine, but this was a matter from the very first that had engaged the attention of all the officers of the company, and he, with them, felt convinved that there need not be any uneasiness felt on that point, as the water in Wheal Peevor was known to be comparatively little, and, therefore, with their 60-in. engine and 16-in. pitwork they could afford to feel indifferent to what anyone said to the contrary.

The Chairman said he was much pleased to hear this practical discussion, as it put him in possession of valuable information about the mine. He thought the next matter they had to deal with was one of a financial character—he meant the question of call. They had a balance of 887*l.* 19*s.* 10*d.* to deal with, and he thought, with their purser, that a call of 10*s.* per share should be made, which would wipe off their debt, and give them about 600*l.* to go on with.

The Purser said the shareholders could see that their calls had been well responded to, most of them having taken the discount for prompt payment.

A call of 10*s.* per share was afterwards unanimously agreed to, and the meeting, which was largely attended, terminated with a hearty vote of thanks to the Chairman for his able and courteous conduct in presiding over the meeting.

SOUTH ROSKEAR TIN AND COPPER MINING COMPANY.

At a general meeting of adventurers, held at the offices of the secretary, Mr. T. Currie Gregory, 62, Saint Vincent-street, Glasgow, on Tuesday, Sept. 10 (Mr. G. S. Anderson in the chair), the following gentlemen were elected as a committee of management:—Messrs. George Alston, R. H. Leadbetter, William Ewing, G. S. Anderson, and T. Currie Gregory. Reports by Capt. Skewis and Capt. Brenton were read, and, after full explanations by Messrs. Skewis and Gregory, were adopted. The company's banking account with the Clydesdale Banking Company was laid on the table, showing 10,000*l.* to the credit of the company. The cost-sheets for April, May, June, July, and August were also submitted, and they were remitted to the committee. The leases from Mr. Pendarves and Mr. Enys were submitted and accepted by the company. The following reports were read to the meeting:—

Sept. 10.—This mine is situated in the parish of Camborne, in the county of Cornwall, in a central position of several of the best dividend mines in this county—Tincroft, North Roskear, Wheal Seton, West Wheal Seton, North and South Crofty, Cook's Kitchen, and Dolcoath—most of which, if not all, have been in continuous working from 70 to 150 years, and are now sunk to the depth of 160 to over 300 fms., and still sinking to deeper levels, with increasing riches. This sett is about 1000 fms. in length on the course of the lodes, embracing several large lodes, varying in size from 2 to 20 ft. wide.

Pendarves' engine-shaft has been sunk 146 fms. below adit, or 171 fms. from surface, and the ground to the west of this shaft extensively worked for copper to this depth, having left large profits to the adventurers. I am informed by the agents of the late company that this was done almost to the entire neglect of the eastern ground, which is unexplored from 120 to 160 fathoms in length towards the main cross-course, near which, in this district, immense quantities of copper ore have been raised. Up to this time the mine has been worked for copper only, leaving a large portion of the lode (in many places from 2 to 20 ft. wide), which is now proved in the 20, 30, and 40 fm. levels to be very valuable for tin, being the deepest point which can now be seen. The great quantity of high-produce tinstuff found in the burrows goes to prove that no attention was paid to tin, and that the lodes must have been rich in that mineral. In the foregoing I have referred only to the lodes formerly worked on, and would now add that there are other known side lodes which in this mine have not been seen below adit, but in some of the adjoining mines have been extensively worked on, and yielded large and profitable returns of tin and copper.

Gregory's engine-shaft, at the western part of the mine, has been sunk 184 fms., and is now available for work. According to the sections, a large quantity of ground has been taken away for copper, and no doubt leaving a large quantity of ground available for tin work. The burrows here are the richest in the sett for tin. Seeing that this mine has been sunk 146 and 184 fms., cross-cuts from various levels to intersect the side lodes can be extended as the mine is being drained. I consider the prospects and results of sinking to still deeper levels in connection with a vigorous development of the eastern ground against the great or main cross-course, are equal to those obtained by the former adventurers. These expectations are justified by the profits realised from the deep and extensive workings of the surrounding mines. I estimate the amount required to erect the necessary machinery to drain this mine to the bottom, clear levels, &c., sink the shaft, and open new ground for twelve to fifteen months, to be from 9000*l.* to 10,000*l.*, which if judiciously spent I believe would place this mine equal with many of the best dividend mines in the neighbourhood. I know of no property in the county with equal prospects.—William Skewis.

Sept. 5.—Pendarves' shaft is sunk 15 fathoms, and strongly timbered. Some fine rocks of tin have been found in the stuff taken from it. The pitwork of previous workings is left in shaft below the 60 fathom level. There is about 15 fathoms more to clear before we get through the choke. The adit level is cleared and secured from the eastern end of Pendarves' land, 100 fathoms to the west of Gregory's shaft. This level is upwards of three-quarters of a mile in length.

Gregory's shaft is cleared and strongly timbered to the deep adit, and 9 ft. below. Footway is fixed from surface to 9 feet below the adit. A new 70-inch engine-house has been erected and covered in (complete) at Gregory's shaft; the fixing of the engine will now be proceeded with, and we expect to be ready to set it to work in (say) eight weeks from this time. Engine-house and loading finished for a 15-inch steam capstan, and the engine will be fixed, and also lifts of pumps from surface to adit, by the time the large engine is ready to work. The required ground has also been removed for boiler-house, equal to receive three boilers, and the greater portion of the walls built. The chimney stack is up 20 feet, and will be finished in time for working the engine. Ground has been prepared and walls built for reservoir, to contain sufficient water for our dressing purposes, &c. The large balance bob and shears have also been prepared, and are ready to fix as soon as the mason-work for the bob is built, which will not require more than a week or 10 days to finish. Earth is removed, and the house for the 28-inch winding engine will be commenced next week, and will be completed in six or seven weeks. The footway-shaft is cleared and secured 20 fathoms below deep adit. There have been six samples taken from burrows, and they produced 2 cwt. of tin to 10 tons of stuff. There is a quantity of tinstuff taken out of the burrows ready to stamp. The whole of the work is being carried on with great energy, and in a workman-like manner, and is laid out with a view to the working of a great and successful mine, its resources being proved to a large extent by the surrounding rich mines of Dolcoath, Tincroft, Cook's Kitchen, and others.—John Brenton.

WHEAL UNY MINING COMPANY.

A general meeting of shareholders was held at the offices, Austin-friars, on Wednesday,—Mr. Walter Pike in the chair.

Mr. Hickey (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

The accounts showed a profit for the three months ending July of 300*l.*, and a credit balance of 206*l.* 0*s.* 9*d.*

The report of the agents was read, as follows:—

Sept. 30.—The 130, east of Goodinge's shaft, is nearly dry. We hope in a few days to regain the plunger-pole at the 130; the drainage below that level will be comparatively easy; we have, however, several pieces of main rods which are weak, and must be replaced with new. At Hind's engine-shaft we are sending down main rods, and fixing 16-in. pitwork at the 80, under adit, or about 100 fms. from surface. We have had some difficulty in getting men and materials to force on this work, but are doing our best to set Hind's engine to work as a shamble engine as quickly as possible. We have made King's shaft complete for hauling to the 60 with double skip-road, and made trip-plats; this shaft is holed to the 110, and will be of good service for the future working of the mine. The 30, east of King's, is yielding a little tin; we hope as we extend east under Fox's to have an improvement. The 50 east is looking better, now worth 10*l.* per fm.; this end is in advance of the 30. There are two stopes in back of the 50, worth 8*l.* and 10*l.* per fm. The ground in the 60 east is easy for driving, and lode worth 8*l.* per fm. A stope in the back of this level is worth 10*l.* per fm., and a winze in the bottom worth 15*l.* per fm. The 80 end east is in a poor bar of ground. Four stopes in the back of the 80 are worth in the aggregate 70*l.* per fm. A stope in the bottom, to make King's shaft good, is worth 15*l.* per fm. The 100 end east is worth 20*l.* per fm. A stope in the back of this level is worth 25*l.* per fm. The 110 east is worth 10*l.* per fm. Two stopes in the back of this level are worth 15*l.* per fm. each. The 120 end east is worth 12*l.* per fathom. A rise in the back of this level, to hole to King's shaft, is worth 10*l.* per fathom. We hope to resume operations in the 130, east of Goodinge's, next week, and also gain access to the western part of the mine through the 130 fm. level.—W. Rich, M. Rogers, S. Coade, Jun.

The Chairman said the accounts showed a profit upon the quarter of 300*l.* The shareholders were aware that during last winter their engine was overpowered, partly on account of an unusual excess of water, and partly from the engine not being of sufficient power. They were now just beginning to reach their profitable ground, so that there was reason to believe the returns would be increased. A heavy outlay had been incurred in connection with the new engine, and in providing pitwork to a depth of 100 fms.; besides which a new shaft had been sunk, which would be of considerable benefit to the future of the mine. He hoped that during the next three months they would be able to hold their own, and at the same time meet the additional outlay; and after the next three months they had reason to look forward to the resumption of dividends. The cessation of dividends had arisen from exceptional causes, being overpowered by water, which would not recur.

Mr. Hickey mentioned that the engine was in the house ready to go to work.

The Chairman said one great point was that East Wheal Uny would soon go to work, from which Wheal Uny would derive an immense advantage, without contributing anything towards it, the resolution having been rescinded.

The accounts were passed and allowed, and ordered to be entered on the minutes.

Upon the proposition of Mr. Beckett, seconded by Mr. Ewing, the committee of management were re-elected.

A vote of thanks to the Chairman terminated the proceedings.

NEW WHEAL LOVELL MINING COMPANY.

The general meeting of adventurers in this mine was held on Wednesday, to conduct the general business of the mine and appoint a purser in the place of the late Mr. Thomas P. Tyacke. Mr. M. H. Williams, of Tredrea, presided, and there was a large attendance of shareholders.

The accounts produced showed a balance of loss on the quarter of 437*l.* 4*s.* 10*d.*, and a balance against the adventurers of 397*l.* 17*s.* 7*d.* After a long and stormy discussion it was resolved, on the motion of Mr. Husband (of the firm of Messrs. Harvey and Co.), that a month's further cost be brought up, and a call of 5*s.* per share be made.

It was also resolved that Mr. J. Walker Tyacke (nephew and partner of the late purser) be appointed purser, and that Mr. Conn should continue to act as clerk of the mine. Two only of the adventurers out of the large number present voted against these appointments, and a poll was not demanded.

The agent's report was most satisfactory in every respect. The lode in the 50 end, east of Kendall's, has greatly improved after passing through the copper, and is now valued at 80*l.* per fm. for tin. A sink has been put down in the bottom of this 5 feet, to test the continuance of the course of tin, and the lode is there found to maintain its value. The lode in the bottom of the new flat-rod shaft on the north lode has greatly improved, and some good stones of tin were broken therefrom on the day of the meeting; this shaft is only sunk about 22 fms. from surface.

WEST CHIVERTON MINING COMPANY.

The quarterly general meeting of shareholders was held at the mine on Sept. 27, Mr. Glubb in the chair.

The meeting was very thinly attended, there being present besides the Chairman only Messrs. Farley, R. F. Michell, Heard, Dabb, Sargent, Pearce, and W. Angear; Mr. Clogg, the purser, and Capt. Juleff, the manager, and Capt. Nancarrow.

The usual preliminaries having been disposed of, the statement of accounts was submited, showing—Cost for the three months ending August: Labour, 5345*l.*; merchants' bills, 1995*l.*: total cost, 8266*l.* Receipts: lead sold, 9177*l.*; blende, 245*l.*: leaving a balance of 10,007*l.*; and a profit on the three months' working of 1193*l.* The agents' report was satisfactory, showing an improvement in one or two points.

Capt. Juleff, in reply to Mr. Heard, stated that the new engine-shaft had been sunk 10 ft. only since last meeting. We have had a considerable increase of water here; now 9 ft. from the 140, in the new engine-shaft, which was very large, and now 8½ fms. below the 130 fm. level.

The Chairman said it was hoped to reach the 140 before this meeting, but water coming in had prevented it.——Capt. Juleff observed that the 130, coming from Hawke's shaft, had very much improved, being now worth 20*l.* per fathom, whereas it was only worth 10*l.* at the last meeting. The stopes about the new engine shaft are also the same as at the last meeting. The returns of lead are about the same; but they had sold 300*l.* worth less of blende, in consequence of bad markets. They had, however, the blende in stock.

M. Clogg said the labour cost was nearly 1000*l.* less than last quarter, owing to scarcity of hands.

Capt. Juleff, in reply to adventurers, said he considered the mine now in as good a position as at last meeting, and indeed, rather improved.

Mr. Glubb, in reply to Mr. Heard, said the cash account was overdrawn at the bank 1105*l.*, but on Monday they would have 3000*l.* worth of bills due.

Mr. Heard observed that the overdraw at last meeting was 3695*l.*, so that it is now 2590*l.* less than then.——Mr. Clogg said they had paid 321*l.* on coal account in advance.

Mr. Heard: Are you raising any lead at all from your shallower levels?——Capt. Juleff: From the 70.

Mr. Heard: The shares have had a considerable drop, but, of course, agents are not responsible for that.——Mr. Farley: The papers did that.

Mr. Heard: We have come here to-day to learn whether the property has advanced or decreased in value, and the agents tell us there is no falling off whatever in the mine, or anything to warrant the depreciation in the price of shares. That is an important fact to go before the world. We are here representing the adventurers, who are scattered all over the kingdom, and the agents would tell them nothing but what were facts. If the agents deceive them they deceive their best friends. The agents are of opinion that the bottom levels will still turn out profitable to adventurers, although the mine is not so rich in shallower levels. I prepared a statement a few days ago with the view to ascertain the difference in value of certain mines now, as compared with what that value was 12 months since, and I find that the diminution is no less than 890,000*l.*, or nearly a million sterling, in 27 mines.

Mr. Michell thought greater care should be taken in admitting reports into newspapers about a property like that.

Mr. Pearce said the brokers sent their agents to the mine, and the reports of these agents got into the newspapers.——Mr. Clogg: As purser of this mine, I wish it to be distinctly understood that I shall be at all times willing to give to any shareholder whatever information he may desire. All the books are always kept on the mine, and are open to any of the adventurers whenever they may desire to see them.——Mr. Heard said he had always found the agents ready to give every information.——Mr. Dabb said every shareholder could write to the purser and get any information he required.

The accounts were then passed, and the meeting proceeded to consider what amount should be paid as a dividend.

The Chairman pointed out that if a dividend of 10*s.* per share were declared it would take away about 340*l.* from the existing balance, while a 7*s.* 6*d.* dividend would add between 100*l.* and 200*l.* to it.——Capt. Juleff said he expected their returns next quarter would be about the same as last.——Mr. Glubb said the price of coals would not affect them so much as anticipated, as they found by buying a superior article the cost was not so great, as much less quantity was consumed.

Mr. Heard suggested a 5*s.* dividend.——Mr. Clogg did not see why they should not declare 10*s.* dividend.——Mr. Michell: It is only a difference of 300*l.*——The Chairman: The great question is whether you will not be worse off at the next meeting.——Mr. Clogg did not think they would be in a worse position at the next meeting.——Capt. Juleff considered that from all appearance they would be as well off as they are now.

Mr. Heard proposed a dividend of 7*s.* 6*d.*——Mr. Fairley moved that a dividend of 10*s.* be declared.——Mr. Heard was anxious to continue the dividends and have a nest egg, but a 10*s.* dividend would absorb more than their profits.

Mr. Dabb thought if the mine were in such a critical position that 300*l.* made a difference, then they had better declare no dividend.——Mr. Mitchell thought they should show to the world that they were in as good a position as before.

Mr. Clegg: There is not 5*s.* owing.——Mr. Dabb urged that to declare a dividend of less that 10*s.* would give colour to all the reports.

Mr. Clegg said, with a balance of 10,000*l.* in hand, he did not see why they should not declare a dividend of 10*s.*

Capt. Juleff being appealed to, he expressed himself in favour of a 7*s.* 6*d.* dividend, carrying over 200*l.* to the balance towards the 13th month cost.

It was agreed that a show of hands should decide the question, and upon the question being put to the meeting there was a majority in favour of the amendment, and a 10*s.* dividend was, therefore, declared. Nothing had been heard from the lords of one portion of the mine in reference to the renewal of a lease, but as they were expected to meet before the next West Chiverton meeting, it is anticipated that some reply would be received by that time. It is the opinion of one of the captains that what has now been taken from the balance will be made up at the next meeting, besides paying the same dividend. The present dividend is 25 per cent., owing to the present price of shares, and those best acquainted with the mine hold firmly to the conviction that it must continue a paying property for years to come. The meeting then terminated.

HAZEL GROVE, CALCOT HALL, AND CAERHUN MINING COMPANY.

The first annual general meeting of shareholders was held at the mines, Brynford, near Holywell, on Wednesday—

Mr. J. N. Brown in the chair.

Mr. Henry Howell (the secretary) read the notice convening the meeting and the statement of accounts, showing a balance at the bankers of 182*l.* 11*s.* 5*d.*, and the report of the directors, of which the subjoined is an extract, were submitted:—

The directors had hoped that they might have been able to sink the engine-shaft to a depth of 100 yards with the present engine and appliances, but the heavy rains which prevailed during the early past of the summer so seriously interfered with the work that, after reaching 62 yards, it was found expedient to defer further sinking until a proper engine and pumps could be erected. The directors are of opinion that the ground has now been sufficiently proved to justify the erection of a powerful engine to drain the mine, to deepen the shaft, and to provide crushing and dressing machinery. This they propose to do with the least possible delay. The whole of the capital proposed to be issued by the first prospectus has been subscribed.

The directors propose at once to call up the remaining 2*l.* per share, thereby entitling the present shareholders to the bonus shares provided by the prospectus. It will, doubtless, be necessary to raise further capital to complete the purchase of the leases, and carry out the works in contemplation, but with the present prospect of speedy returns there is little doubt that the shares will be eagerly sought for. A considerable quantity of the ore already raised is so pure that it may be made saleable with very little dressing; and the directors hope to be able to sample the first parcel of 10 tons in the course of the ensuing month.

Capt. Wm. Wasley, in reporting upon the mine (Sept. 21), stated that the sett is extensive, and contains several east and west and north and south lodes, which are intersected by the celebrated Old Pant-y-ne and New Pant-y-ne lodes, which act as cross-courses or feeders to both the east and west and north and south lodes. These lodes have yielded very large quantities of ore in other mines in the district, and which he believes will produce immense quantities of ore in the mine if worked in the manner they well deserve. He described the various points of operation, and for the future and proper working recommends that a new 50-in. cylinder engine, with two new Cornish boilers, for pumping alone, should be at once erected on Dixon's shaft to work a 15-in. plunger-pump from 60 yards to surface, and the 9 in. pump which they have now on the mine to sink with. Collect as much water as possible into the cistern at the 60 yard level, so that the 9-in. pump in the bottom of the shaft would be nearly a match for the 15-in. pump, which would, no doubt, enable them to sink the mine from 100 to 150 yards deeper. If these recommendations are carried out he has no doubt but that they would soon have one of the best mines ever opened in Wales. He considers that since the commencement of the mine, for the nuber of men employed, there has been a great deal of work done.

Capt. William Lean reported in nearly similar terms.

In the course of the discussion which followed the presentation of the reports the question was raised as to the desirability of taking immediate measures for the erection of pumping machinery to enable the engine-shaft to be sunk at least 150 yards, and the Chairman and secretary were authorised to obtain tenders for an engine with at least a 50-inch cylinder. The directors were also authorised to appoint a manager to take charge of the mines and superintend the erection of the machinery. It having been stated that probably 20 tons of ore might be dressed within the current month, instructions were given to prepare the ore for the November sale.

The shareholders present inspected the works, and expressed themselves highly satisfied with the prospects of the mine, the various piles of ore raised during the driving of the levels from Dixon's, Twigge's, and Brown's shafts affording the most encouraging evidence of the existence of rich deposits at greater depths.

A vote of thanks to the Rev. D. Jones, the resident director, to Capt. Twigge for his gratuitous supervision of the works, and to the Chairman and directors for their services terminated the proceedings.

[For remainder of Meetings see to-day's Journal.]

GREAT LAXEY MINING COMPANY.

An attempt has been made by the "Laxey Miners on Strike" to reply to the statement of Mr. G. W. Dumbell (on behalf of the directors) published in last week's *Mining Journal*, but the answer is not satisfactory, because it merely seeks to shift the responsibility, and, therefore, rather justifies than otherwise the course which the directors have been compelled to adopt. It seems now beyond question that a system of fraud has been going on with the full knowledge of the general body of workmen; and as there is reason to believe that the majority of them participated, its discovery was the more difficult. No less than 76*l.* was paid in the sheet for April 5, 1872, as the wages of persons who had no existence except in the pay-sheet, and this was so ingeniously managed that it is difficult to determine by which companies of men the deception was practised. It is this complicated state of affairs that renders it so difficult for out-shareholders to comprehend the exact reason for the various steps which have been taken by the insular directors, whose object seems to have been to secure to the miners the wages they were formerly receiving, and at the same time stop the pilfering system complained of. The apparently inconsistent conduct of the directors towards the men is quite comprehensible to all who know the details completely, and none know these better than the men themselves. The shareholders must still have confidence in the insular directors, or the evil will probably not only continue, but increase.

There is, perhaps, no method of evading a question which is more unsatisfactory than that of endeavouring to meet it with a counter question. All men in business know but too well that it frequently happens that they suffer from a system of peculation going on amongst their workmen, which it is entirely beyond their power to put a stop to; and that although the result is that the profits of the business are seriously reduced, the most that can be done is to await an opportunity of making a complete and permanent change, whilst, fortunately, this opportunity usually presents itself sooner or later, owing to internal disputes amongst those who have previously been participators. The manager, perhaps, neglects his own duty, and thus loses control over the officer next below him, and so on until at last there is scarcely a man in the entire establishment who is performing the amount of work that might reasonably be expected of him, so that it ultimately becomes more economic to hand over the work to another, who, having better knowledge of the mode of dealing with men, can obtain a reasonable amount of labour from each, than attempt to get it done himself. Nor should workmen complain if they suffer from the adoption of this course, since it can generally be traced to some more energetic workman, well acquainted with the methods by which masters are victimised, commencing business on his own account with the full knowledge that, inasmuch as the amount of these peculations would alone represent a good percentage of profit, he can, by preventing them, accept prices which to the master he has left would be quite unremunerative. These workman-masters, it is true, often carry matters to the other extreme, and thus an entire trade becomes ruined through the want of honesty on the part of those who are dependent upon the maintenance of wages to be enabled to earn a comfortable livelihood. The shareholders of the Great Laxey Company may congratulate themselves that the opportunity for uprooting a ruinous system has occurred, and they need not doubt the realisation of the directors' hope that the struggle, although it has been a painful one, will in its result prove most beneficial to the company.

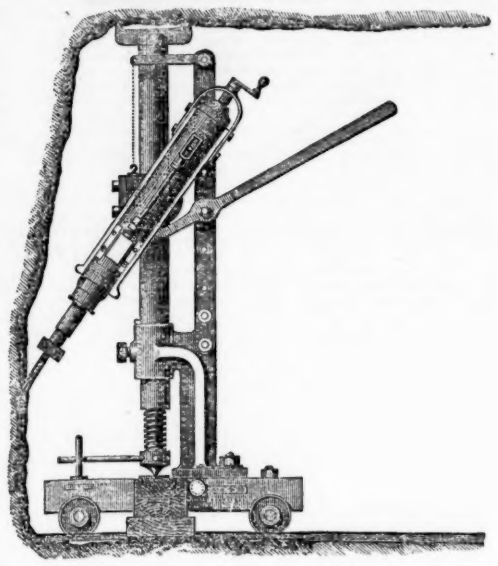
The "Laxey Miners on Strike" do not deny that the directors have had to deal with "difficulties far greater than are at present understood," and it would appear that, although during the last ten years, at least, various remedies have been tried, it has not been practicable to remove the evil. In February, 1864, Mr. Dumbell wrote:—"The fact is, I am resolved, if I live, to *break up the system which has been eating up the vitals of the company:* no matter what was raised the expenses must run away with all;" and the remedy then tried was to place the entire control of the men, and, indeed, of the working expenses under and above ground, in the hands of Capt. Kitto. But the evil continued, for in 1867 Capt. John Kitto wrote that a number of men were seen at the mines office on a pay-day, and received money, who were never seen at the mines at any other time. Capt. Kitto, then, had been as unsuccessful as his predecessors in remedying the abuses; and it appears that the most that the company have been able to effect in the five years since Capt. Kitto wrote is to secure a change by which improper payments to persons who have no exis'ence except on the pay-sheet, instead of to persons who did work, but presented themselves on pay-day. But for the strike, these improper payments might have been continued indefinitely, and in spite of all efforts on the part of the management to prevent them.

Until the commencement of the present dispute the existence of the evil was known to the management, although not admitted by the workmen; but, as the men now acknowledge it, the difficulty of dealing with it will not be so great. The "Laxey Miners on Strike" contend that if the *whole* of the miners "were receiving money *they knew they had not worked for* (the italics are not ours), the directors were not justified in saying that the *men had just cause* of complaint." This argument is quite true; but the directors have not said that the *whole* of the men have been overpaid, neither have they said that the *whole* of the men have just cause for complaint. Indeed, it was in this that the difficulty was found; the directors could not discover and separate the honest from the dishonest workmen, and this discovery being now alike hopeless and useless, it will, no doubt, be to the advantage of all that the investigation be not further continued; and, as the main desire of both directors and miners seems now to be that every workman shall receive his fair proportion of the amount charged to the company for wages in each cost-sheet, it may be hoped that the active working of the mines will no longer be interfered with. As to the mode of paying the men, we are of opinion that the "Laxey Miners on Strike" are correct in their view that every person employed, whether miner or labourer, should have his money at the office, for no one should be dependent upon a fellow-workman for his proportion of the amount earned between them. The only alternative for paying the labourers at the office, which is at all likely to work satisfactorily, also emanates from the "Laxey Miners on Strike," and is that the contract for a given piece of work be made with the miner only, and that the miner taking the bargain pay his labourers himself. There are now so few points upon which the directors and the men are at issue that it will be very regrettable if these few cannot be cleared up, so that from the meeting on Wednesday the termination of the strife may be dated.

Extraordinary Mining Dispute.—At the Petty Sessions, held at Temple Cloud, near Bristol, a mining case which had caused some notoriety in the neighbourhood came on for hearing. Nine persons were charged with having on Sept. 9 with force of arms unlawfully and injuriously entered a certain [illegible] mine at West Harptree, then in possession of Edmund Lloyd Owen and others

and expelled and put them out from the possession of the said mine and workings, against the peace of our Lady the Queen, her crown and dignity. There were upwards of 30 witnesses for examination, and the secretary and other officers of the Duchy of Cornwall, who, it was alleged, represented the lord of the manor of West Harptree, and many other gentlemen from different parts of England were present. Mr. Young, of the Oxford Circuit, appeared for the complainants, a mining company at West Harptree, and Mr. Carter, of the Western Circuit, was counsel for the defendants. The first witnesses were under examination between three and four hours, and as the case, if proceeded with, seemed likely to occupy several days, defendants' counsel, after consultation, agreed to an undertaking that they should withdraw, the defendants having applied for an injunction to restrain them from further interference with the working of the mine.

THE PROGRESS OF MACHINE ROCK-DRILLING—THE BURLEIGH DRILL.



Although the proposition to increase the rapidity and economy of mining operations by replacing hand labour in the tedious and laborious operation of drilling the holes to receive the charge of powder for blasting down the rock, has been for many years before the public, the commencement of any really practical progress in machine rock-drilling, at least, in this country, must be considered to date from the introduction of the Burleigh Drill; the first public experiments with which after the drill was brought over to England, being those made at Deptford, and reported on in the *Mining Journal* of May 21, 1870. Accounts of the excellent work done with it in the United States had preceded it by many months, and the manner in which it went through hard granite at the rate of 12 in. per minute, and without necessitating an excessive number of strokes per minute, impressed all present with the feeling that its merits had certainly not been over estimated, and that the Burleigh Drill was a machine destined to become almost as much a necessity to the working of mines as the stone-breaker, or the dressing plant.

Inventions of this character always require a longer time to secure their adoption than those which can be tested for a few shillings or pounds, and thrown aside without serious loss in the event of their failing to answer the expectations of the purchasers; yet, within two years of the first sale made in this country, the Burleigh Drill has come largely into use in the principal mining districts, and has given such universal satisfaction that second orders have been received from several firms which have given it a few months' practical trial. There are now between 30 and 40 Burleigh Drills in daily use. Messrs. Ord and Maddison, of Darlington, were amongst the first to test the drill, and they are now using two of them; Messrs. Nixon, Taylor, and Cory, of Aberdare, have also purchased their second drill; Mr. W. Torrance, of Mid-Calder, was so satisfied with the working of the first that he purchased three others subsequently; and the West Cumberland Hematite Iron Ore Company, Workington; Messrs. Cory, Yeo, and Co., Swansea; and the Coltness Iron Company, Newmains, have each likewise purchased a second drill, and a glance at the list of persons and firms who have adopted it will suffice to give ample confidence as to the practical value of the invention. Capt. Wasley, in a communication to the Polytechnic Society of Cornwall, writes that he has drilled holes 1¼ in. diameter in sandstone 14 in. in the minute with it, the machine used being the No. 1 size, or "Jumper for Mining Purposes," weighing 3 cwts., and costing 125*l*. It gives 300 blows per minute, and he considers it impossible to get out of order, as he has seen it bear some very rough usage with steam at 70 lbs. to the square inch pressure upon it. He thinks it would be a wonderful thing if it were got into the Cornish mines, and expresses regret that in this respect the Cornishmen should be so much behind the miners of North Wales. Since Mr. Wasley wrote the machine has been exhibited at the Cornwall Polytechnic Society, and gained the First-Class Prize Medal of the Society, in addition to which it has been adopted by several practical men in Cornwall and Devon, including Mr. Chatwood, of the Rocks Mines, near Bodmin, Messrs. Martin Brothers, of Lee Moors, Plympton, and at Sir Morton Peto's quarries, near Truro, so that Cornishmen will have the opportunity of seeing them in operation without going far from home; and, as a further instance of its value for mining purposes, it may be mentioned that it is to be used in the driving of the St. Gothard tunnel.

The rapidity with which the Burleigh Drill progresses (which is on the average about 120 ft. of rock per day—making 40 holes, 3 ft. deep and 2½ in. diameter) necessitated the adoption of a ready and convenient means of removing it to and from the face of the level or tunnel, and this has been found in Cranston's support, an illustration of which, with the Burleigh Drill attached, is given above. The object of the invention is to hold the machine in every position necessary to drill the holes most effectually for blasting purposes. The carriage consists of a trolly on four wheels, which carries a movable support, actuated horizontally across the trolly and the face of the drift by means of a screw working in a nut or thread in the bottom of a movable support. A hollow bar or stretcher, which fixes the carriage when it is in position, is held in a vertical position by the movable support, and is fixed by means of the screw working in a thread at its lower end and the clamp at its upper end. It is to this hollow shaft that the drill is attached, the raising and lowering of the drill being effected by a lever working upon the fulcrum formed by the pin placed in one or other of the holes in the bar behind the tubular column, which bar is itself held in position by the bolts which attach its lower end to the movable support, the upper end being at the same time held to the hollow shaft by means of a loop. When the drill is fixed in position the pin and the upper bolt are withdrawn, and the bar, with the lever attached, falls back out of the working of the drill.

With regard to the mere working of the Burleigh Drill, it seems that steam or compressed air can be used at discretion; but for mining and colliery purposes compressed air is decidedly preferable; indeed, in Messrs. Nixon, Taylor, and Cory's colliery the steam was found a source of considerable inconvenience, but Mr. George Brown, the manager, writes that they now use it with compressed air, which is a complete success. He considers one man with the drill equal to six men boring by hand; that the drill is a great acquisition in a pit bottom where very hard rock is to be perforated for blasting charges; and that a machine-drilled hole is much more effective than a hand-drilled hole, owing to its more roomy nature where the powder is laid, and this with the same size of charge. Altogether the drill has proved itself, in practical use, as successful as could possibly be desired; and the opinion that a great many persons have long entertained, that the general introduction of machine-drilling in Cornwall and Devon will be the means of adding largely to the profits of the adventurers, and the reputation of the western counties as a field for successful enterprise, seems now likely to be confirmed.

FOREIGN MINING AND METALLURGY.

Prices of iron continue to be well supported in France. First-class merchants' iron is at 12*l*. 16s. per ton, and plates make 16*l*. 16s. per ton. There are, however, many anomalies observable in the present singular state of affairs. Thus the bulletin of the Committee of French Forgemasters shows that contracts for iron tyres were recently let by the French railway companies at higher rates than others for steel tyres. At Paris affairs remain quiet, but a revival in building industry is hoped for, the Government being disposed to relieve from taxation all buildings which may be commenced at Paris within the next six months. The dividend for 1871-2 of the Naval and Railway Forges and Steel Works Company has been fixed at 2*l*. per share. The Loire Mines Company will pay, Oct. 16, an interim dividend of 5s. per share.

At Paris business in copper has not revived, and prices have experienced some reduction. Chilian in bars, delivered at Havre, has made 93*l*.; ditto in ingots, 98*l*.; tough English, 98*l*.; and Corocoro minerals (pure standard), 93*l*. per ton. At Havre there has been little passing in copper, and it would be difficult to indicate prices with precision. At Marseilles prices have displayed considerable feebleness, and quotations have been, to some extent, nominal. The German copper markets have also been tending downwards. There has been little animation in tin at Paris, but there has, nevertheless, been some improvement in prices. Banca, delivered at Havre or Paris, has made 173*l*.; Straits, delivered at Havre or Paris, 164*l*.; and English, delivered at Havre or Paris, 162*l*. per ton. Tin has been rather feeble at Marseilles, but prices have exhibited little change. At Rotterdam prices have fallen; Banca has been quoted at 94 fls., and Billiton at 90 fls. At Cologne, Banca has been weak, but the Berlin tin market has presented little change. There has been an advance of 8s. per ton in French and Spanish lead, and one of 6s. per ton in English lead at Paris. Lead has been well supported at Marseilles, and at Cologne the upward tendency in prices has become more decided. There has been a further rise in zinc at Paris; Silesian, delivered at Havre, has made 24*l*. 16s.; and other good marks, delivered at Havre and Paris, 24*l*. 12s. per ton. Zinc has little more than a nominal quotation at Marseilles, and at Breslau and Hamburg the article has been much neglected.

Prices of iron are still tending upwards in Belgium, so far as the state of affairs can be ascertained. The situation seems, indeed, to be altogether unprecedented. It may be summed up in an abundance of orders, high cost prices, a vertiginous bewildering activity, and a good deal of indicision at the bottom of it all. Tenders have been invited this week for steel and iron Vignolles rails for the Belgian State railways; the rails are to be delivered in lots of from 500 tons to 1500 tons each. There appears to be a growing impression that the advance in prices which has been continually taking place of late cannot be carried much further. It seems useless, under present circumstances, to attempt to give a Belgian price current; it may be observed, however, that refining-pig, hard iron, stands at 5*l*. 12s. per ton. Good qualities of iron are more sought after in Belgium than inferior qualities, as at present prices good iron is more remunerative than bad, and all the more so since bad iron is just now worse than ever in Belgium. The tender of M. Filleal-Brosy has been accepted for a great bridge across the Danube at Pesth. The amount of M. Filleal-Brosy's tender is 185,172*l*.

The net profits realised by the Herve-Wergifosse Colliery Company last year are officially returned at 4338*l*. This sum admits of a dividend at the rate of 1*l*. 16s. per share, as in the two preceding years. The net profits of the North of Charleroi Colliery Company last year amounted to 9845*l*., exclusive of 7200*l*. for interest due to the shareholders. A supplementary dividend of 3 per cent. per annum will be paid for 1871, making the whole return upon the shares for that year 1*l*. 12s. per share.

A formal denial has been given by M. Mathieu, secretary of the committee of colliery proprietors of the Nord and the Pas-de-Calais, and also by M. Vuillemin, managing engineer of the Aniche Mines, to a statement that 250,000 tons of Pas-de-Calais coal had been sold on English account. All the colliery proprietors of the Pas-de-Calais were interrogated upon the subject by M. Vuillemin, and they all replied in the negative. Notwithstanding the very explicit denials of MM. Mathieu and Vuillemin, prices are still tending upwards in France, and there appears no present probability of their experiencing a decline.

A strike has occurred in the central Belgian coal basin. The period selected for the strike was, no doubt, chosen designedly by the men, as coal is very scarce, the winter is close at hand, and any check in production would have lamentable consequences. The working miners of the basin in which the strike has occurred demand an advance in wages, basing their claim on the high price of coal; meanwhile, they remain very quiet. We shall see what influence this strike exerts on prices; for the present business remains quiet. In the other basins the state of affairs remains much the same. At Liége there are rumours of an advance, but quotations are not well defined at present. Those who are in want of coal buy at almost any price which may be demanded of them. The production remains feeble, but it is hoped that the winter will bring back to the mines some workmen who are now engaged in agricultural industry and in brickyards. In the Couchant de Mons there is extreme activity in deliveries; the same may be said of the extreme Couchant, but the production is altogether insufficient. There are again apprehensions of a deficiency as regards means of railway transport. The State has endeavoured to provide for this difficulty to some extent, by means of a ministerial decree, which authorises industrials to employ their own trucks. It remains to be seen how far this arrangement will proceed, and whether industrials will be enabled to obtain supplies of trucks within a reasonable time. It appears improbable that they will succeed in doing so under present circumstances.

There is no disposable stock of coal or coke this year in the Ruhr (Prussia) district, and not only is this the case, but many industrials of Westphalia and the Rhenish provinces find themselves without any supplies of combustible. The poorer classes will, it is to be feared, suffer considerably from cold during the ensuing season. Producers show little anxiety to enter into contracts for 1873, as they hope to sell at higher prices this month and in November. It appears from an official return that during the first quarter of this year 84,802 workmen extracted 3,549,545 tons of coal in the Ruhr basin. In the second quarter of the year the number of workmen employed was 63,254, and the extraction amounted to 3,115,836 tons. The reduction observable in the production in the second quarter of this year was attributable to a strike which prevailed in the Essen district in June. Not only had the diminution of 403,709 tons observable in the production for the second quarter of this year made its influence felt upon the local markets, but the scarcity of coal has been increased by the requirements of newly-established metallurgical works. The production of the Ruhr dsstrict in 1871 appears to have presented a respectable increase as compared with 1870 and 1869. The Essen Chamber of Commerce reports that the high price of coal has not exerted at present any injurious influence upon the local iron trade, ironmasters having recouped themselves by increasing the prices of their products. As regards the apprehended competition of Alsace and Lorraine, its products will only enter Germany upon a large scale when the re-establishment of customs' duties has closed the French market to Alsace and Lorraine industrials—that is to say, at the commencement of next year.

IRON ORES IN SPAIN.—In a recent communication to the Foreign Office, Mr. Mack, British Consul at Malaga, makes some statements which are of considerable importance as determining the practicability of obtaining from that country supplies of ores suitable for smelting in British furnaces. Mr. Mack states that some most notable discoveries of iron ores have been made in Spain—of hematite in the district of Bilboa, and of the most superior magnetic in the province of Malaga. His object is to record more especially the value of the latter discoveries. He says that it is a subject of dispute as to the relative merits of these ores for the smelting purposes of the present day as to which, for example, is most suitable for the Bessemer process—the test most generally applied. There are two most magnificent lodes or deposits in the district of Malaga, calculated to be of inexhaustible proportions. The first has supplied two large and important smelting works, with their corresponding rolling-mills, for the last 30 years. The smelting has been carried on with charcoal from Spain and Tuscany, and the effect upon the deposit, although the extraction has been large, appears insignificant. The iron which has been produced has been always of the finest quality and singularly malleable, so much so that it has generally, for some purposes, been puddled up and mixed under the hammer with a certain proportion of harder English pig iron imported for the purpose. This mine of magnetic ore belongs to two parties—half to a wealthy resident Spanish house, and the other half was purchased by an English firm from Glasgow, and they have since constructed 3½ miles of railway down to the sea, with a handsome iron pier, sufficiently large to accommodate steamers of 1000 tons to load alongside. They have since formed a company with 300,000*l*. capital, and have started fairly at work. The mine is half-way between Malaga and Gibraltar, at a place called Marbella, the importance of which will be greatly increased in a few years. The other discovery is quite recent, and although its vast proportions and merits are fully acknowledged, it has not yet been worked.

MINING IN AUSTRALIA.

Sydney, Aug. 10.—The great business of the colony is done at present in the share market. Since I last wrote the work of prospecting has gone on with undiminished vivacity: indeed, the London trade lists have quickened the pace at which fields of investment have been marked out, companies formed, and capital subscribed. If a man were to say to me that he had no lot in the matter I should regard him with astonishment, so general has the participation become in this which a year ago was nobody's business, and is now everybody's. I can go into no society of which the staple of conversation is not tin, gold, and copper. To one not utterly lost in such considerations it is amusing to observe how quickly every topic of conversation started takes a downward direction, and is lost amid stream tin, copper lodes, and gold reefs. I have not had an opportunity of talking to the persons about it, but I should expect to hear them complaining of the difficulty experienced in their visitations in resisting this strong gravitating power, for the souls of women are as much absorbed in speculation as those of the men. They are every bit as able to talk about paying things as their lords, and read the advertising sheet with as much avidity. If for the present there seems to be a lull in the work of company formation it is because the spare capital of the colony is absorbed. The rush to gold reefs absorbed a large amount of capital, and comparatively little of it will be returned for many months to come; but the return from tin and copper is more speedy, and for this reason these metals now excite most interest.

A new stimulus has just been given to gold mining, however, by the news of Krohman's last crushing. Stone weighing 15½ tons yielded in the gross 6733 ozs. of gold. From 160 tons of poor stuff 803 ozs. were got. A crushing of 333 tons of stone from Brown's claim yielded an average of 1 oz. 7 dwts. 2 grains per ton. A vein at another mine (Shakespeare), 9 or 10 in. wide, has been opened, which will yield 5 ozs. to 6 ozs. per ton. From Rawsthorne Mine 267 tons of stone yielded 4½ ozs. to the ton. At Chambers Creek the General Grant Company are upon gold which will yield from 8 ozs. to 10 ozs. to the ton. The mining reporter of the *Herald* writes from Hill End:—"I was down Holterman's claim a fortnight since, and reported brilliant prospects. The results of last Saturday put them in the shade. In driving to the north to connect the two shafts a magnificent patch was broken down, and though not containing 2000 ozs. of gold, was richer than anything yet discovered. This stone comes from the same vein as Krohman is getting his rich stuff from. All the golden holes are getting richer stone now, and there is every prospects of a succession of big cakes, not cakes like Krohman's, but really good ones nevertheless."

It seems to be a misfortune that anything so rich as Krohman's has been found. It gives people false notions, and destroys their appreciation of payable but poorer and more reliable stone. Ridiculous expectations are formed, which are doomed to disappointment. Were such finds the rule the word precious as applied to gold would soon be a misnomer. People at Sydney are becoming fastidious to a degree—they turn their backs on stone which does not go a great many ounces to the ton (Brown's for instance, mentioned above, was deemed a poor yield), while it is a well-known fact that 3 dwts. or 4 dwts. of gold per ton will yield a dividend. It would be well if those who proclaim as swindles all claims that do not return them cent. per cent. for their money once a month would bear in mind the years of unproductive toil endured by the owners of what are called the "Golden Holes" before the vein was found; there would then be more patience with progressive mines. Some swindles there undoubtedly will be, judging from the wild way in which people have been taking the baits, skilfully gilded by manufacturing speculators. The total quantity of gold received per escort at the Sydney Branch Mint for the last month was 27,105 ozs. The aggregate receipts for the first seven months of the current year amounts to 203,648 ozs., against 143,391 ozs. for the same portion of 1871, and 92,099 ozs. for that of 1870.

But I have said that tin is the great draw. Large portions of country east and west of the main north road between Glen Innes and Tenterfield are taken up. Some of the claims are very rich, and a few companies are already exporting tin and paying dividends out of advances. A small amount of capital is required to work them. A share market and investors' guide is published as a supplement to the *Sydney Mail* (Aug. 10), which those interested in such matter may consult. They will perceive that the shares are generally 1*l*. shares, on which a few shillings only are paid. Of 51 companies (several in Queensland) not one has call up more than 10s. With respect to the discovery of tin, there can be no doubt that the credit rests with the Rev. W. B. Clarke, who was the first to perceive the existence of gold in these colonies. That gentleman in his address in May last to the Royal Society, New South Wales, said—"The first mention and first discovery of tin as a product of New South Wales were made by myself," and this is found to be correct by reference to reports which appeared in the *Herald* so far back as 1849. At that early date he predicts the discovery of tin wherever granite occurs with abundance of schorl," and in 1853, in the neighboured of the Severn river, he reports the actual discovery of tin. In 1854 he says—"I found tin abundantly in the southern country and all through New England and its flanks." In 1861, before a select committee, he said—"I found tin on the Murrumbidgee, on the Alps, and in New England." At present it is only sought in New England.

The interest in copper is somewhat subdued since the arrival of tin, the sources of the latter being fewer in number. The Peak Down shares are at 6¼ premium, and are paying a dividend of 15s. per share.—*Times* Correspondent.

Adelaide, Aug. 12.—An interesting table has this day been published, showing the dividends that the Moonta Mine has paid to its shareholders from the first payment in 1862 to the present year. The total amount that has been paid in that period is 680,000*l*. The number of shares was originally 3200, but in 1869 each share was sub-divided into 10. The most prosperous year seems to have been 1866, when 30*l*. was paid upon each share, but the dividends paid since January of this year already amount to 2*l*. 15s. per share—that is, to 27*l*. 10s. per original share. The Burra Mine, too, after a rest of nearly eight years, has begun operations again, and a dividend of 2*l*. 10s. per share has been declared. The present dividend will make the 56th paid by the mine, the amount which has already been distributed in this manner being 776,160*l*. The Paramatta Mining Company has paid nine dividends on 5000 shares, amounting in the aggregate to 30,000*l*. The property is in a most satisfactory condition, and shows greater evidence of permanence than ever. Every foot the men drive north carries an extremely rich lode of ore, which appears to be slightly dipping. A 10s. dividend would be paid as usual in August, but before Christmas it was proposed to pay one of 15s.

Wellington (N. Z.), Aug. 5.—Dividing the value of the total quantity of gold exported among the mean number of miners employed in alluvial and quartz mining, it appears that in 1871 the average was per man 101*l*. 16s. 5½d. This mode of estimating the productiveness of gold fields is, as Mr. Brough Smythe, Secretary of Mines in Victoria, remarks in a recent report for Parliament, obviously the only method which admits of a fair comparison of the productiveness of one gold field with another, and is now invariably adopted in the Pacific States of the American Republic. The result by no means pretends to afford anything approaching an average of the individual earnings of the miners, but simply indicates the measure of success which has attended mining operations generally; whether due to well applied labour and skill, or to the comparative richness of the deposits, cannot exactly be ascertained. Upon a similar calculation the average earnings per man upon the Victorian gold fields, where the miners employed during the year 1871 numbered 58,111, were 81*l*. 0s. 9½d., leaving a balance in favour of New Zealand of 20*l*. 15s. 1d.

Melbourne, Sept. 12.—New gold fields have been discovered at Yam Creek, 150 miles from Port Darwin. Several hundred miners have gone there.

AUSTRALIAN TIN.—Most encouraging accounts continue to be received from the various tin mines in the North. At Cope's Creek Maclean and party commenced sluicing two or three weeks ago, and the results are highly satisfactory; two bucketfuls of tin per day can be obtained by the labour of two men. Moses and party have now upwards of 2 tons of tin on hand; from 200 to 300 cwts. of tin, it is stated, can be obtained by the labour of four men from top stuff; and from indications, they expect to meet with very rich deposits. At the Tyngarra Mine, in the same locality, six bucketfuls of tin of good quality were obtained on the 10th ult., by the labour of four men with one sluice. From nearly all the mines the reports received from day to day are of the most satisfactory character, and keep up the interest in mining speculations. In the New England district alone 17 Government surveyors are busily engaged in marking off land for tin mining companies. The Surveyor-General states that "a good deal of land has been taken up for tin and copper mining (principally tin), extending over very large portions of country east and west of the main north road between Glen Innes and Tenderfield. The secretary of the Elsmore Tin Company reports that the first crushing of the lode yielded 67 per cent. of tin, Mint assay. A very rich block of land on vegetable Creek is being worked by Marshall and party, who hold a selection of 40 acres. The four men who are at work are able to raise 6 cwts. of tin per day, as the claim is very rich and close to a granite bar which stands below them, forming a catch where the creek narrows. Tin has become an important item of export both from Sydney and Brisbane. Most of the produce of our northern mines finds its way to the latter port, where a portion is shipped direct to England, the balance to this market. Smelting works here on an extensive scale are projected, and a site has been obtained for the purpose close to the harbour. Last month's shipments to London were 479 ingots tin, 501 packages. Deposits of tin ore have been found at Barrow Creek in the Tumut district.—*Sydney Morning Herald*, Aug. 10.

AUSTRALIAN MINES.

PORT PHILLIP AND COLONIAL (Gold).—Clunes, Aug. 12: The quantity of quartz crushed during the month ending July 16 was 5281 tons; pyrites treated, 9 tons; total gold obtained, 1279 ozs. 8 dwts.; or an average per ton of 4 dwts. 20 grs. The receipts were 4881*l*. 12s. 11d.; payments, 3657*l*. 19s. 1d.; profit, 1223*l*. 13s. 10d. The amount divided between the two companies was 1000*l*.; of which the Port Phillip Company's proportion is 650*l*. During the two weeks ending July 30 the quantity of quartz crushed was 2408 tons; pyrites treated, 17 tons; total gold obtained, 626 ozs. 5 dwts., or an average per ton of 5 dwts. 5 grs. Remittance, 500*l*.

— Telegram, dated Galle, Oct. 2, in anticipation of the mail leaving Melbourne on Sept. 11, and due here on Oct. 28: "Month ending Aug. 13, yield per ton 5 dwts. 6 grs. Fortnight ending Aug. 27, yield per ton 5 dwts. Remittance, 600*l*."

YORKE PENINSULA.—The directors have advices from the committee of inspection at Adelaide, dated Aug. 10, with reports from the Kurilla Mine to the 5th of that month. The following are extracts from Capt. Anthony's report: Since my last, July 12, the rise in back of the 15 fm. level is holed to the surface, so that I have now a small shaft all the way to surface from the 25 fathom level in a line with the intended new shaft, and available for enlargement and timbering for an engine-shaft. . . . I have a pare of men stoping the ends of this shaft, at once lengthening it to make it fit for an engine-shaft, and paying more than the cost of stoping. At the 25, east of Hall's shaft, I have put in a stull (gallery), and have commenced stoping the ore from the ground through which a

winze was sunk in May and June last; this stope will now yield a fair quantity of ore. Six men are working on tribute in back of the 35, east of Hall's, and are making good wages at 13s. 4d. in 1*l*. Miners are extremely scarce, or I would set other pitches at even 15s., or more, in 1*l*. Since last report I have sold 12¼ tons of ore, realising 115*l*. 18s. 1d. Ore now raised at surface and underground (say) 40 tons, containing (say) 10 per cent. of copper, will realise (say) 28*l*. Some delay has been caused by putting in the gallery referred to, or more ore would have been broken. The engine and pitwork are in fair working order. Except during the short success of Deeble's shaft the mine has not looked so well nor so much ore raised as is now being done.

English and Australian.—Advices dated Aug. 12: Returns of furnaces at work not come to hand by this portion of mail. Since date of last advices 150 tons of copper had been shipped.

Scottish Australian.—The directors have advices from Sydney, dated Aug. 10, with reports from the Lambton Colliery to the 6th of that month. The sales of coal for the month of July amounted to 13,473 tons.

Yudanamutana (Copper).—Adelaide, Aug. 12: The superintendent writes: The furnaces have not been fully at work during the past month, in consequence of the weather having continued to be so very wet. The works have been in a continual flood, and everything saturated with water (wood, ore, &c.); this has very much retarded the work.—New Furnaces: I have carefully considered this subject, and am of opinion that as soon as we have sufficient funds new furnaces should be erected, but not at the Blinman, as we have as many there as we are able to get wood for to work them. My opinion is that furnaces should be built at some distance—say, 15 to 18 miles from the mine—in the woody country, and on the road to Port Augusta. At the proposed new works there would be plenty of good wood for a long time to come, and I believe there would be a great saving. The advantage being that we should always have a supply at hand, and no need to stop from a short supply. At present the carters have to go from 10 to 15 miles for wood for the Blinman Works, and return empty, whereas if the new works were built they could take ore from the mine, and on their return take wood to the old works, which would be an inducement for others to engage, and secure a better supply at the Blinman. Under these circumstances I do not think it would be wise to erect more furnaces at the mine.

Australian United.—Mr. Kitto (Aug. 13) writes: "Although not out of debt here, I consider the prospects of the Central Mine such as to warrant my sending you 500*l*., a draft for which I now enclose. It will take at least two months before all is clear. I shall not send you another draft until all debts are paid. I have made an underground survey, and will send you plan by next mail. As money is required to open the mine, you must not expect heavy remittances for awhile." Mr. Lamb also writes: "Your mine at Malmsbury continues to look well, promising still better for the future. With the exception of three days' stoppage, caused by the breaking of the winding-engine, one machine per day has been washed off, giving remunerative yields, as will be seen by the enclosed statement of accounts. I am afraid it will be necessary to purchase a new winding-engine when we can afford it. A more powerful engine would enable more dirt to be raised, and would be altogether safer. By next mail, judging by present appearances, I trust to be able to note a still better yield for the month's work."

FOREIGN MINES.

St. John del Rey.—The directors have received, per Amazone, the following report, dated Morro Velho, Aug. 29: The new hauling-wheel was set in motion on Aug. 24, and has continued to work well since sinking in shafts. A shaft when last measured was 126 fms. 5 ft. 10 in.; since sunk 1 fm. 3 ft.; present depth, 128 fms. 2 ft. 10 in. B shaft when last measured was 125 fms. 5 ft. 3 in.; since sunk, 2 ft. 5 in.; present depth, 126 fms. 1 ft. 8 in.

Don Pedro.—Extract from letter dated Aug. 27: The points in operation are much the same in appearance and quality as when last reported on, and the ores returned are still of low quality, and principally taken from the No. 8 shoot of lode. The works generally are progressing favourably. At the stopes, underlie lode, preparations have been made to rise, and commenced to put up from the Canoa stopes at the 25 fm. level to explore this lode. At No. 6 shoot we are glad to have to remark that the force is increasing a little, and we hope during the ensuing month to commence stoping the southern part of this shoot towards the bottom of the mine; although the lode here is not of high quality it is desirable to take it away, as rich deposits have often been found whilst stoping this lode, and may again be met with. At No. 8 shoot the stopes generally are without change to notice. The western inclined rise, to develope crush over Bryant's level, has reached the crush, and close on same several fair samples of gold were obtained, and a small quantity of low quality box-work was also extracted, but whether it be a defined line or one of the small deposits that have been often found we do not know, but every measure is being taken to ascertain the extent and value of this ore ground. The eastern inclined rise is still under suspension from want of air.—Prospective Works: Permanent Inclined Plane: The progress is a little more favourable than formerly, but on account of the size of the excavation it is necessarily very slow.—Vivian's Shaft: The ground is hard for excavating, consequently progress is slow, but by reason of its hardness it is much safer for future works than if the ground had been soft and troublesome. Symon's shaft is being re-opened very satisfactorily.—Explorations: Dawson's Mine: The ground since the first auriferous samples were obtained has been clayey, but it is changing again, and sandstone intermixed with small lines of jacoting is now making its appearance, otherwise no alteration has taken place in our exploration.

Anglo-Brazilian.—Extract from letter dated Aug. 29: Passagem: The supply of stone for the month has been fully up to the average. The bottom stope at deep adit, towards Foster's, is opening out very satisfactorily, the proportion of pyrites in the stone being much greater than we have had for some time past. No alteration has taken place at any other point to notice.—Reduction Department: The total amount of stamps duty for the month falls short of 500 tons compared to 631 tons for July, owing to the continued scarcity of water.—Cost: Every endeavour has been made to reduce the expenditure in accordance with the orders lately received, which will be still further reduced for the coming month.

General Brazilian.—Extract from letter dated Aug. 28: Operations at both adits continuing favourably.

Rossa Grande.—Extract from letter dated Aug. 28: Bahu: I am very pleased that the appearance the lode presents in the bottom of sump-shaft is such as to warrant my stating that our prospects are most encouraging. I find as we increase in depth the lode is becoming more pyritic, continuing of average size and of good quality. No change has taken place in the 18 west calling for remark since my last report. The lode in the 10 west has improved in size, and judging from its present indications we shall soon be laying open profitable stoping ground. —Cachoeira: Very fair progress has been made in sinking Richard's shaft since the pumping-wheel has been set to work, but I am sorry to say that the lode is still small. In the 10 east the lode is 2 feet wide, of good quality. No change has taken place in the adit end since my last advices. The ground in No. 2 cross-cut is at present very hard as we advance, the discharge of water is increasing, the lode maintaining its usual course would have been intersected before this.

Sao Vicente.—The deep adit, which is still troublesome, is being driven with great caution, and the work is substantially done. I am pleased to say the ground is again auriferous, and the best sample ever taken from this level I took this morning; I have confidence in this level as it gets onward. In Bernard's adit we have passed the spot left by the former proprietors, and are still making good progress. In the No. 1 level the line is small, but continues to show gold in sampling; I shall begin to-morrow to pass some of it through the small stamps, consequently I shall soon ascertain its value. There is no notable change in any of the other works since my last.—Sao Vicente Proper: Here every point continues to improve. The large deposit of quartz is opening well; as we get further down there is a much greater quantity of pyrites making in the lode; at present one-third of the stuff is composed entirely of pyrites, 2 cwts. of which I had bruised by hand, having no other appliance for the present, gave 11½ ozs. gold. I have no doubt whatever that this place will turn out well, but before I go to the expense of erecting expensive machinery I will have reserves enough laid open to pay for its erection. Morro das Almas is also turning out some rich stone, but the scarcity of water here at this time is against us. There is no change at Buracao since my last.

United Mexican.—Extract of despatch from Mr. E. Hay, dated Guanaxuato, Aug. 22: The produce from the mines of Jesus Maria and Remedios have fallen off both in quantity and quality, especially in the latter mine; this renders it exceedingly difficult to obtain the requisite supplies of ore for the reduction works, and consequently the grinding power is not fully maintained.—New Concern: In the end of the adit of San Cayetano the favourable appearance alluded to in previous report has not materially changed. Another wall of the vein has since been traversed, but less defined, and water still oozes out from the southern side of the adit. The driving of the adit is being continued, but it has been determined to open a cross-cut in a southerly direction to cut the lode before the adit will intersect it. The level from the cross-cut of San Edwards, in the direction of the upper wall of the lode, has been driven four varas, and is in veinstuff, with water freely oozing.

Bensberg.—J. W. Hoffman, Sept. 29: The wash ore in the open east continues of a good quality. At the east end of the open cast we have stopped getting carbonate for the present, having reached the road, which at present we do not wish to disturb, and under which the bed of carbonate extends. Our delivery of ore for October will be taken chiefly from the bed at the west end, which is of a very good quality. The small progress in the sinking of the shaft last week (3 feet) is due to the hard nature of the rock, every inch having to be blasted. We have sunk 49 feet, there being still 2 feet to sink before we shall cross-cut. We cannot sink deeper than 53 feet with the pump without letting it further down the shaft, which we are not in a position to do without an auxiliary pump. Ore delivered this month, 70 tons.

Battle Mountain.—Captain Richards, Sept. 5: Virgin: In the 188 ft. level, being driven north, a very fine stone of black oxide of copper has been discovered in the bottom of the shaft; although not in a large body it seems to go down, and will be sunk upon in the course of a few days; this looks well, as it is the deepest point in the mine. The 113 ft. level, being driven north, has much improved in every respect, the quality of the ore being much superior to that discovered in this level about a month since. In the 73 ft. drift north we have as yet discovered nothing, although we are led on by green stains and occasional pieces of carbonate, which I think will lead to something worth all our trouble. Jack's stope has fallen off in its yield of ore, but what it does produce is high grade rock. Jack's north is yielding fairly, considering the nature of the ground. Pierce's stope, in the back of the 113 ft. level, is now producing a good lot of ore. Although Jack's stope has considerably failed, the general prospects of the mine are better than I have ever before seen it, there being ore in the two deepest points, and before now we have discovered nothing of importance at this depth. Richards's winze, being sunk in the bottom of the 135 ft. level, presents the same appearance, having a kindly indication for copper in depth. In the 135 ft. level south work has been resumed. The mine at present looks well, and should the ore continue in the 113 ft. drift, north of Virgin, a very valuable piece of ore ground will be opened. From present indications I am led to believe more strongly than ever that, on the mine being sunk to a greater depth, and the levels driven north, a property will be opened, up of a lasting and dividend-paying character There have been 310 sacks raised during the past week.

Tolima.—The directors have advices from their agent in Colombia, of which the following is an abstract:—"Frias, July: Returns, $9550·6; cost, $3441·1; profit, $1109·5 = 184*l*. 18s. 9d. Included in the above cost is the sum of $1178·3 expended in permanent works. The superintendent writes with regard to the mine:—Williamson's Cross-Cut: This appears to be very near the eastern lode, and from the large quantities of water coming from the end we anticipate that this lode will be a very strong one. Lambi branch promises well; mineral for export 9 in. wide.—Lower Powder-house: Mineral has much improved in quality. —Spanish Bottoms, No. 1: We are now down 17 fms. below the adit, and have reserves of ore amounting to 93 fms. at a low estimate (say) 424*l*. This reserve remains, after having stoped ore to the value of $47,000 in five months time, and four months have been employed in opening this ground.—Organos Mine: The machinery for reducing the ore at this mine was being progressed with, and in the mining department all was going on favourably.

San Pedro.—R. M. Kitto, Aug. 17: The following is my report of this and the adjoining mines:—The new shaft is sinking below the 135, by eight men, at £40 per metre; the ground is hard, and I think it will stand without timber. The new end, in the 135, driving north 58° east, will produce 3 tons of 30 per cent. ore per fathom. The north part of manto is suspended for the present, on account of being short of workmen. The west part of manto, in the 135, driving on the edge of the manto in a north-west direction, will produce 6 tons of 40 per cent. ore per fathom. The 135, driving south, will produce 4 tons of 35 per cent. ore per fathom. The new end, driving east from the side of the last-named level, will produce 6 tons of 35 per cent. ore per fathom. A tribute pitch in the back of the 122, at one-half tribute, will produce 2 tons of 40 per cent. ore per fathom. A tribute pitch in back of the 30, at half tribute, yields 2 tons of 30 per cent. ore per fm. We are still filling up and securing the old works.—Santo Elena Mine: A chiffon sinking on the course of the manto, or lode, is producing good stones of ore.—San Antonio Mine: In a shaft sinking from surface the ground is still favourable.—Cuba Mine: We shall put work here in the course of a few days. In conclusion, I beg to state the San Pedro Mine is opening out splendidly in the bottom, and by sinking the new shaft 40 metres I think we shall have one of the best mines in the country.

Almada and Tirito.—A telegram from the manager, Mr. Clemes, shows net profit for the month of August, after deducting all expenses, of 1606*l*. 12s.

Frontino and Bolivia (South America).—The directors have advices (Aug. 12) from Messrs. Restrepo and Sons, the company's bankers at Medellin, accompanied by the usual accounts, and a remittance of gold, valued at 1779*l*. 6s. 8d., the produce of the Bolivia Mines, for the month ending July 20. The following are the accounts:—Produce: 745½ ozs. of gold dust, from 2300 tons of mineral (average yield per ton 6 dwts. 11 grs.), 1779*l*. 6s. 8d.; at Frontino and Bolivia Mines, and expenses in London and Medellin, 1095*l*. 2s. 6d.: profit, 684*l*. 2s. 4d.

Exchequer.—The secretary begs to notify, for the information of shareholders, that a letter has this week been received from the manager, announcing that he would shortly send a full and exhaustive report; he had been unable to do so earlier, from having been so fully occupied in pushing forward the enlargement, &c., of the mill, and in the erection of steam-hoisting works at the mine. Local newspapers to end of August have been received, from which the following extracts are taken:—*Alpine Chronicle, Aug.* 24: "Our town (Silver Mountain) is gradually increasing its population, consequent upon the development of the mineral resources of this district. Beside the addition of a large number of miners to be put on the Exchequer and I X L Mines, it is estimated we shall have over 100 men at work in this vicinity next winter, cutting wood."—"Mill Machinery: The pans, &c., for the Exchequer Quartz Mill have been purchased at Virginia city by the manager, Mr. Chalmers, who also purchased two quartz wagons, each of about 4 tons capacity, and horses, &c., all of which will probably arrive at the mill to-day."—"A deep adit on the Accacia lode, being the north extension of the I X L, is now being driven for the Exchequer Mine proper, and in a few days a run for the same purpose will commence from the lower tunnel of the I X L. The mine can be worked in four different ways—by the shaft, lower tunnel, Accacia tunnel, and the lower tuuel of the I X L."

Emma.—By cable from Salt Lake City: "Forwarded no ore this week to New York; raised 140 tons first class ore this week; raised no second-class ore this week; 500 tons first-class ore at railway depôt; 200 tons first-class ore at mine; sold 440 tons here."

Colorado Terrible Lode.—Mr. G. Teal, agent (Sept. 7), writes: Outside of Mine: Progressing favourably. I am reducing the hands working upon third-class ore, in consequence of the heavy stock of ore on hand.—Inside of Mine: The shaft is completed timbering, and the men are now working in the drifts upon good mineral; west drift, 7 to 8 in.; east drift, 4 to 5 in. When the men are out of danger from the blasting in the drifts we shall continue sinking the shaft, where the mineral is from 10 to 12 in. thick.—The Winze in 4th Level West: This is 70 feet from new shaft, and is now down 12 feet. I have the pleasure to announce that we have struck 12 in. of the finest ore that I ever saw come out of the Terrible; I have three large pieces at the office, from 10 to 12 in. thick, weighing from 150 to 200 lbs. each; if you think proper I will send to the London office two of the pieces as specimens of the Terrible ore, which truly indicates the deeper we go the larger the deposit and richer the ore. The other workings are about same as my last. The 23rd shipment is on the way from Georgetown to Golden.

Last Chance Silver (Utah).—Telegram from Mr. Maxwell: "Have struck lode 3 feet wide in tunnel." The following telegram has been subsequently received from Mr. Frames, one of the board, sent out to examine the property of the company: "Tunnel loaded (vein all ore) producing good milling ore. Prospect good. Returns three months." These communications are very satisfactory as regards the position and prospects of the mine, and fulfil the promise contained in the manager's telegram sent on Aug. 29. The board, with a view of paying dividends at an earlier date above indicated, have directed Mr. Maxwell to lose no time in realising the ore, and making remittances.

Independence (Gold Quartz).—Capt. H. Rosewarne (Sept. 7) reports that the rock shows some improvement in the middle shoot. He had 73 car-loads, or about 51 tons, taken out from the footwall of the lode, which looks better than any rock laid open above the drain tunnel level. Capt. Rosewarne states that the quartz looked well when first struck, and if the gold last in it as well as it is now it will do the shareholders a great deal of good, the lode being large, and extending some hundreds of feet east to surface, and down to the drain level. Capt. Rosewarne adds that Mr. Price, the company's financial agent, has sent an estimate of the expenditure necessary for placing the mine in a paying condition; but, although he does not know the exact figures, he is of opinion a great deal of the money will not be required until it can be got from the mine—the profits from the mine will pay a considerable portion of the cost of the new hoisting-machinery, stamps, engine, pumps, &c. The saw-mill and new engine were expected to be at work by the end of October. It had been a very difficult job to get the heavy parts of the machinery from the railway to the mine, but the heaviest casting was then within sight of the office, and the boiler which was at Downieville being much lighter, they could come right along with it. The quantity of quartz raised for the week ending Sept. 7 was 148 tons; and 15 heads of stamps, working five days, had crushed 128 tons, being an average of 114 20 tons per day per stamp head.

Pacific.—H, Prideaux, Sept. 13: The slopes on Batters' ledge are looking much the same as when I last reported. Nos. 2, 3, and 6 are still yielding good ore. No. 5 slope will be worked more vigorously when we complete a chute which we are at present raising to connect this slope with the 400 feet level; this we expect to finish before long. In the 460 feet west level we have a good vein; also in the winze which is being sunk to intercept this level. The vein in the rise on the Buel North Star ledge is producing some rich ore. The south cross-cut is letting out a quantity of water, which is a good indication; the contract in this cross-cut is completed, and will be re-set in a day or two. We are at present milling ore at the Manhattan Company's mill, particulars of which will be sent you when the returns are made.

Birdseye Creek.—G. S. Powers, Sept. 10: Since my last I have cleaned up Uncle Sam claim, and the result, as statement will show, was not so good as last month. The reason of working outside the main channel is on account of not having sufficient pressure to work the main bank. We shall be able to over come that next water season by taking pressure from South Yuba ditch, as I am now making arrangements to do. I have secured partly enough pipe from the South Yuba Company, and shall buy the balance to make out the string. Water will be turned out about October 1 to make repairs on South Yuba ditch for a few weeks, after which, Mr. Marsh informed me, it would be turned on again; and he thinks now he will be able to furnish the company with water the balance of the season. I shall build high flume, and make necessary repairs on company's ditch whilst the water is off. The shaft is going very slow on account of the great amount of water, but I shall be down to grade in a few days: then I shall sink a sump to hold the water, and the pump will keep it clear, so that difficulty will be overcome, and I will endeavour to push the tunnel ahead as fast as possible. The contractors are doing as well as I could ask in the mainface, and if the rock continues favourable we will make sharp work with the tunnel after getting opened out through the shaft. The water may be turned out before we get this run made; if so, will not send telegram for September till the run is finished. I am having extra lumber left on the ditch in case of breaks when we could not get it hauled in; also a supply for the claims during the winter. The expense of the shaft, as per pay-roll, includes everything, machinery, &c. I have settled for the houses washed away on the company's ground, and everything is running smoothly at this date.

Malpaso Gold Washing Company.—The directors have received advices from their superintendent, Mr. C. R. Clarke, Aug. 17. On July 19 I passed water through the entire length of ditch. On the 20th I tested pipe and machine: on the 22nd I turned water on to go to work; from that date until Aug. 1 was very busy strengthening weak parts of ditch and getting everything into good working order. I told Mr. Williams (who I had placed in charge of machine and sluice) to keep an account of the washings; and from his account I find half of our time up to date has been occupied in running off waste; but as we advance the ratio of waste decreases very rapidly; for instance, the first days show six and eight hours waste to four and two new dirt; now it shows eight and nine on new dirt to two and one on waste. We have run the machine 18 days; in that time we have washed away a piece of ground about 160 ft. long by 80 ft. wide, that will average 15 ft. deep. We now have a face on the mine about 100 ft. long, and the banks are from 25 to 30 ft. high. Next week I am going to examine another Yuebrada, of which I spoke in another letter, and, if it is practicable, shall endeavour to have its water brought to the mine, with this addition—we could run in the wet seasons about three more such machines as the one now in use; but in case of an increase in the works, I should advise, in place of two or three small machines, the addition of one large one with a large sluice: then as much work could be done with much less monthly expense, as it requires as many hands, or nearly so, to run a small machine as a large one; and 600 in. of water in one body will do as much, or more, work than 800 in. distributed at four different points; it will also give the advantage of having the mine all before it, and it can then be worked more thoroughly. I intended to have made a clean up before this mail, but the amount of dirt washed will not justify it. I shall probably make two before I write to you again. During the past week I have made an entire change with my employees. I have contracted with D. V. Arango for the maintenance of the ditch for the sum of $150. He undertakes to keep the ditch in good order, and look after the water, turn it on, so it will be at the mine by six o'clock in the morning every day, and turn it off again in the evening; have men go over the ditch every morning before the water is put on to see there is no obstruction, and if any remove it, and do all other work necessary to the entire satisfaction of the company's agents. The company furnishes all necessary tools. I have also agreed with him for cutting down and clearing off the forest on the mine ahead of the machine, at the rate of $24 per almo, or about $12 per acre. I have discharged all the carpenters but one, so have only one, at $40 per month; one blacksmith, at $1 per day; one sluice man, at 80 c. per day; six peons, at 45 c. per day; 2 cooks, at $40 per month each; three boys for cooks and blacksmith, at $4 per month each; one sawyer, who is paid for his lumber as he delivers it. We need a dwelling for Mr. Williams and family, and several other improvements, which I shall arrange as soon as possible. Our ditch comes along on the other side of mountain from the works, and has been carried through in tunnels at different points. In order to get it where I wanted it, I had to run a new tunnel 110 ft. long; this piece of work I believe I overlooked in former reports. The dirt in the banks is looking well, and we now have a streak of tight gravel in the bottom, about 4 ft. thick that is rich, this, I hope, will increase as we advance. The company's general agent writes that the machine has been the wonder of the day. Truly, no one who has not seen it at work can form any idea of the amount of gravel it puts away. There is now splended ground in sight with only 6 feet of old stuff on top; good results may be depended upon. We shall wash up in about fifteen or twenty days. I want to send a good remittance.

Rica Gold Washing.—The directors have received advices from their superintendent, Mr. Clarke, July 19, stating that he was at the Rica Mine arranging about the outlet, &c., and that nearly all the stores had arrived, and the making of the pipe will be commenced immediately.

Snowdrift.—Ernest le Neve Foster, Sept. 14: In the stopes we have opened in a splendid pocket of mineral, which is producing well. All the other parts of the mine are much the same. I will make a report with Capt. Johns next week.

Thornhill Reef.—W. Salter, Machinery: The house-lift pumps and stampers are completed; we have tried them, and they work splendidly so far. They are different to anything ever used in the colony, and better than anything I have ever seen or heard of in the colony. Stone-breaker now in course of erection. —Mine: The two levels and shaft are still being continued. The 300 ft. level is in 120 feet north of the main shaft, with 18 feet to finish the present contract. The 500 feet level is in 42 feet, with 16 feet to finish the present contract. Referring to the remarks made in your letter about the work that has been carried on at the mine, and what it was understood in England I should do, I cannot, on looking back, see how I could have acted differently to what I have done. I commenced on the shaft before the machinery arrived; first, as nothing could be done till that was ready, to let the stuff come through, and then, as soon as the winding gear was delivered, it was put in hand, and when finished men were put to work in the mine; and in no other order could the work have proceeded. These men were set to open the levels necessary for working the mine in the most economical and workman-like manner. Stoping might have been commenced at once, but to what purpose? There was no crushing machinery ready and if there had been the reservoir did not contain sufficient water to start with; and had it been as now, overflowing, there was a drive (one of the first jobs put in hand, and both ends started at once) to be put in 300 feet, before the water could be made use of, and I could not put up the pump to supply the stamps till the drive was finished, and a shaft sunk 50 ft. to meet it outside the stamp-house, the stamps being no use till all was finished. I thought it best to open up the mine while the work was progressing, and otherwise do the work that was more immediately necessary, consequently the new boiler was built and got ready as without this, if anything had happened to the new boiler the mine would have been stopped, the water would have risen in the workings, and we should have had the expense of baling it out again. The judiciousness of this step was fully proved, as the very day the new boiler was ready for work a joint gave way in the old one (this is now being repaired by our engineer), which would have caused stoppage, and given rise to all the mishaps above stated, but was, as you see, prevented by looking a little ahead. You may say, why did I not put on more force at the machinery, and less at the mine, so that we might now be in a position to go right on with crushing? I could certainly have done this, and started stoping and driving at once in the mine, but stone can be easier broken at 8s. per ton with the present way of working than at 10s. per ton by stoping and driving. Then, again, by stoping and driving, before we get through somewhere for air, the place would get so full of smoke as to greatly retard the work; besides which we should be pulled up in a month or two for stone by this way of working, and the bottom drive and sinking could not have been carried on at all, which would in its turn have caused a delay, and, perhaps, stoppage in the future, for which the shareholders would not have hesitated to hold me responsible, so that to have carried out your wishes with due regard to the future of the mine could only have been done, as I have before suggested, by having sufficient funds to carry on the mine work and erection of machinery, together with a full force, though even then it could not, as you will see, have been done as quick as some would wish.

Mr. Charles Kent is quite right when he says in his letter that I seem anxious to lay open something better than that already seen, but with this difference that although the work in progress will effect the object (if there is anything better ahead) it is not being done for that purpose; but, as before explained, to work the mine at the lowest possible cost, and to do this the 300 ft. level should be continued through to Fyfe's shaft before stoping is commenced. Mr. Kent also complains of my reports being indefinite, and this you endorse. I have read his letter over carefully, and it seems to me the indefiniteness complained of consists in my not having included in my reports what I am not doing, as well as what is being done. I have certainly always confined myself to the latter, and really if I am to include the former I shall scarcely know where to stop. I wrote on this subject in one of my former letters, and asked you to mention anything you wished to know that I may have omitted, and I have always tried to answer clearly all your communications, and give every information, and must now express my regret at not having succeeded in doing so to your satisfaction. The assay apparatus I always intended to be for the purpose of trying the tailings as they ran away from dressing machinery to see what was being lost; and, as crushing was not started, there was no immediate use for an assay building and furnace, consequently I begrudged the money to erect it when so many other things were dragging for want of funds. Besides the erection of machinery, the work necessary to be carried on at once to secure a continuance of large quantities of stone weekly is the drive through to Fyfe's shaft, sinking the main shaft, cross-cutting for Mosquito Reef. If this is not carried on now a delay in the future will be the result.

The following is a copy of a private letter from Mr. Salter to the secretary:—"Many thanks for the illustrated papers and your circular, which latter I read with great interest, as it is excellently got up, and contains a deal of information. I am glad you sent me Mr. Kent's letter, as it has enabled me to answer it, which I hope I have succeeded in doing satisfactorily. The thing has to a great extent been influenced by the smallness of the capital, and if I had rushed ahead, instead of pulling up as I did, I would not like to answer for what the results might have been by this time. I wish you to bear in mind that had I sent you assays of the stone in the mine, and the return from crushing afterwards not being in accordance with said assays (which they would most certainly not, as they never are), there would only have been me to blame, and disappointed shareholders and recent purchasers would have been only too ready to say deception had been practised for raising the price of stock. Therefore, I did what I considered much better—sent you (last mail) the return of stone actually crushed, which no one can get out of or gainsay. I am, like yourself, very much concerned at the continued delay, but I have tried to take all the chances of success without running any risk, as I know by carrying this through successfully (the amount of capital necessitated caution), we can make lots of money together in other concerns, which is necessary for me, as I have made nothing out of this.

Harvey's stamps work splendidly. Everybody that sees them believes they will be a great success; but we must have a little more wear at them first. The Tangye pump is a great improvement on the old style; we feed our boilers with it. Of course I saw some risk in travelling out of the old course by adopting these things with the winding-gear, but it don't do to stick too tenaciously to old ideas when you see what your own judgment tells you is better, because you are afraid to run the risk of change. The stamps are beautifully made, and reflect great credit on the makers. I did a good stroke in buying the 6-in. pumps. They are 20*l*. per ton out here; in fact, I was wrong only in not bringing all I put down on my list. You will see by my official letter that I am erecting the stone-breaker, but the dressing machinery I shall have to let stand till I know if you get the additional capital. I have said nothing of the prospects, as that was all gone into in my last, and no stone has been taken down since, and I take it for granted that these prospects are satisfactory enough for anyone; the returns from the crushing, and the ¾ oz. prospect in the end of the drive, with the gold in the 500 ft. level, are about as much proof of the value of the property as anyone can have, short of the absolute certainty in the shape of bars of gold unlimited in number.—Wm. Salter.

[For remainder of Foreign Mines see to-day's Journal.]

MINING IN COLORADO.

Georgetown, Sept. 12.—The Coldstream lode, during the last week in August, yielded 12 tons of first and second class ore. This was taken out without stoping, as operations in developing the mine were confined to drifting and sinking shafts only. The following figures will give an idea of the value of the ores of this mine:—A large specimen of galena and brittle silver assayed $6 597½ per ton, of 2000 lbs. First-class ore, shipped to Freiberg, averaged 514 ozs. of 54 per cent. lead: first and second class mixed, by car-load (10 tons), 295 ozs. of 26 per cent. lead. The Cowles Brothers are working in the John Bull lode, in Leavenworth Mountains, near the summit. They have now a 4-in. vein, which yields ores from which the mill return is 1700 ozs. The Glasgow lode in Sherman and Brown Mountains, an old discovery, is now being operated by the owners—the O'Brian Brothers, of Silver Plume. They commenced taking out the ore in August last, which assayed from 371 to 1072 ozs. of silver to the ton, from a vein which varied from 3 to 6 in. in width. Some samples of this ore at the Snowdrift mill are full of ruby and brittle silver. The working shaft is now 35 ft. deep. In sinking 23 ft. $1225 was taken out; lowest mill return from the lode, 210 ozs. The Mammoth lode, in Brown and Sherman Mountain, has an ore vein from 5 to 24 in.; from this 6 to 7 tons of ore were taken recently, which returned 170 ozs. of silver to the ton; and 2½ tons, with a return of 250 ozs. The Antelope lode, on Republican and Sherman Mountains, is being worked extensively, and is well developed. Twenty men are now employed, and large quantities of ore are mined, the first-class of which returns from 350 ozs. to 460 ozs. per ton; second-class, 160 ozs. to 180 ozs., is shipped mostly to Europe. Fifteen tons of first and second class mixed returned an average of over 300 ozs. Mr. C. C. Marble is working for a Cincinnati company—the Caledonia lode, on Republican Mountain. He employs 12 men, and is taking out a considerable quantity of ore, the first-class of which assays 457 ozs. The Steward Silver Refining Company shipped since last week five bars of silver, valued at $4133. The capacity of these works is about 10 tons daily, which fact shows that the ores treated must have been very rich—say, about $688 per ton, of 2000 lbs., a pretty good evidence of the richness of our silver mines.

Considerable mining is now going on in Park and Summit counties. On Snake river district there is a great deal of activity; a great many lodes have been discovered. The ores are of a low grade generally—say, 30 to 50 ozs. of silver per ton as they come from the mine, but by concentrating can easily be made up to 100 ozs. Gulch mining on Breckonredge region presents a livelier aspect than it has for years. With a limited supply of water they are taking out 1 to 2 ozs. per day to the hand. At the head of Hoosier gulch W. Bemrose, with three men, is making upwards of 1 oz. of gold per day to the man. At the old mining camp of Quartzville there is a population of several hundred delving into the sides of Mount Lincoln in pursuit of silver ore; about 30 tons of ore daily is raised, ranging in value from 50 to 500 ozs. of siver to the ton. At the Moore lode is a pile of about 100 tons, estimated to contain between 400 to 500 ozs. to the ton. Altogether the Mount Lincoln district presents a very lively appearance, and promises to be next season one of the most important mining camps in the territory.

Golden, Sept. 16.—The railway is now completed from here to within six miles of Black Hawk, and cars are running regularly. The demand for coal at Black Hawk is already 150 tons per day; it will be double this amount within a month from this, and when the rail reaches Central and Nevada cities it will amount at least to 500 tons per day. There is, therefore, good prospect ahead for all owners of coal land at Golden; when the railway reaches Georgetown the demand cannot be less than 1000 tons per day. The entire grading of the Golden and Julesburg line is contracted for—210 miles; also for 500,000 ties; a large force is now at work on it. This railroad will enable the ores of Boulder county to be sent down to Golden, to be smelted or shipped east.

Pearl Fishing in Australia.—The belief that the south-west coast of the Australian continent, from Nicholl Bay to the head of Yorke's Peninsula, abounds in pearl banks, has led to the initiation of a pearl-fishing expedition, to start from Melbourne. The expenses of a 12 months' expedition are set down at 1000*l*., and with 60 days' clear fishing it is calculated on realising 6400*l*., leaving a net profit of 5400*l*. The calculation on which the scheme is based places the value of mother-of-pearl in the English market at from 85*l*. to 225*l*. per ton. This is independent of the pearls, which represent a considerable item.—*Melbourne Age.*

BURLEIGH ROCK DRILLING MACHINERY.

Specially Applicable
TO
SINKING,
QUARRYING,
AND
MINING PURPOSES.

THE BEST & ONLY PRACTICAL DRILL.

IT DOES NOT GET OUT OF ORDER.

PROGRESSES through Aberdeen granite at the incredible rate of 10 inches per minute.

SAVES £5 a day as compared with hand labour, independent of the enormous saving effected in the general expense, such as PUMPING, VENTILATION, INTEREST OF CAPITAL, &c., from the fact of the "put out" being increased four-fold.

DRILL POINTS.—The saving in steel alone is considerable. One drill will go through 20 feet of Aberdeen granite without sharpening.

Machine and Stand for Quarrying and Sinking.

PRIZE MEDALS:

Royal Cornwall Polytechnic Society, August 21, 1872.

Liverpool and Manchester Agricultural Show, Sept. 12, 1872.

Middleton Agricultural Show, Sept. 18, 1872.

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PATENTEE AND SOLE PROPRIETOR.

Orders received and executed solely by—

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FOR GREAT BRITAIN AND IRELAND.

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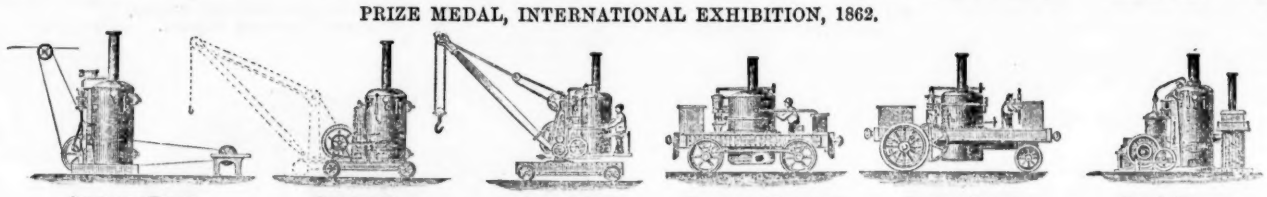
CHAPLIN'S PATENT PORTABLE STEAM ENGINES AND BOILERS.

PRIZE MEDAL, INTERNATIONAL EXHIBITION, 1862.



STATIONARY ENGINE, From 1 to 30-horse power. No building required.

PORTABLE HOIST, 1 to 30-horse power. With or without jib.

STEAM CRANE,* 30 cwts. to 20 tons. For wharf or rail.

CONTRACTORS' LOCOMOTIVE, 6 to 27-horse power. For steep inclines and quick curves.

TRACTION ENGINES, 6 to 27-horse power. Light and heavy

SHIP'S ENGINES, Winding, Cooking, and Distilling. Passed by Government for half water.

* These cranes were selected by H.M. Commissioners to receive and send away the heavy machinery in the International Exhibition.

From the STRENGTH, SIMPLICITY, and COMPACTNESS of these ENGINES they are extensively USED for GENERAL PURPOSES, and also in situations where STEAM-ENGINES OF THE ORDINARY CONSTRUCTION CANNOT BE APPLIED.

ALEXANDER CHAPLIN AND CO.,
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CRANSTON HILL ENGINE WORKS, GLASGOW.

ENGINES OF EACH CLASS KEPT IN STOCK for SALE or HIRE, and ALL OUR MANUFACTURES GUARANTEED as to EFFICIENCY, MATERIAL, and WORKMANSHIP.

Parties are cautioned against using or purchasing imitations or infringements of these patent manufactures.

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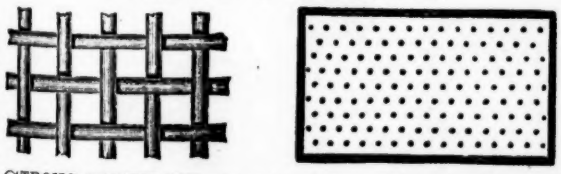

STRONG WIREWORK, the cross wires equally bent; also BEST STAMP GRATES, both of iron and copper, and punched copper plates. DITTO TUBBED. All the above prompty supplied at

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PRIZE MEDALS—PARIS, 1867; HAVRE, 1868; HIGHLAND SOCIETY, 1870.

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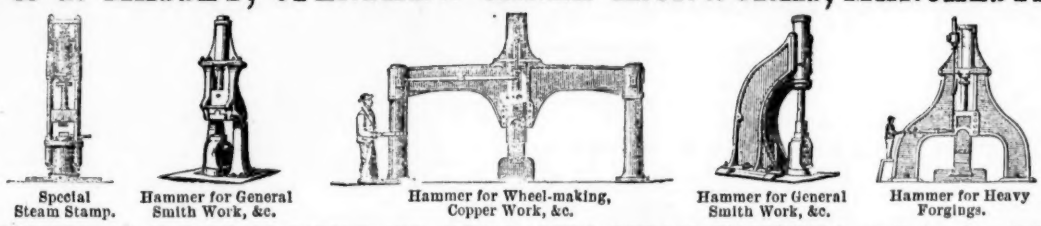

Special Steam Stamp. Hammer for General Smith Work, &c. Hammer for Wheel-making, Copper Work, &c. Hammer for General Smith Work, &c. Hammer for Heavy Forgings.

PATENTEES AND MAKERS OF DOUBLE AND SINGLE-ACTING **STEAM HAMMERS** of all sizes, from 17 lbs. to 20 tons, with Self-acting or Hand Motions, in either case giving a perfectly **DEAD-BLOW**, while the former may be worked by hand when desired. **Large Hammers**, with **Improved Framing**, in **Cast** or **Wrought Iron**. **Small Hammers** working up to 500 blows per minute, in some cases being worked by the foot of the smith, and not requiring any separate driver.

SPECIAL STEAM STAMPS, of great importance for Smith Work, Bolt-making, Punching, Bending, &c.

Hammers for Engineers, Machinists, Shipbuilders, Steel Tilters, Millwrights, Coppersmiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for use in Repairing Smithies of Mills and Works of all kinds, for Straightening Bars, Bending Cranks, Breaking Pig-iron, &c.

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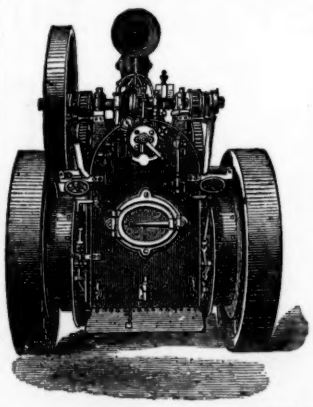
ROBEY AND COMPANY, LIMITED,
ENGINEERS, LINCOLN.



PATENT PORTABLE
HAULING AND WINDING ENGINE
WITH
PATENT DRUM WINDLASSES,
FOR MINING PURPOSES.

This Engine is specially commended to Mining Engineers and others, as by its adoption—

Haulage along inclined drifts is easily and cheaply effected;

The expense of sinking new shafts is greatly reduced, neither foundations nor engine-house being required;

It is available not only for winding, but for pumping, sawing, &c.—a great desideratum at a large colliery;

It can be very quickly removed (being self-propelling), and fixed in any desired position.

Prices and full particulars on application as above, and also references to view the engine in successful work near Derby, Carnarvon, Haverfordwest, Darlington, Durham, Penzance, and other places.

THESE ENGINES WORK WITH MARVELLOUS ECONOMY IN FUEL.

CHAS. PRICE AND CO.'S RANGOON ENGINE OIL,
AS SUPPLIED TO H.M. DOCKYARDS AND FLEET.

THIS OIL is suitable to every kind of Machinery. As a lubricant it is equal to the best Sperm or Lard Oil, while it possesses the great advantage of being entirely free from any principle which will corrode the metal bearings.

For particular kinds of Machinery, the Oil may be specially prepared of a consistency and character adapted to the nature of the work to be done.

"Chemical Laboratory, 7, Printing House-square, Blackfriars, April, 1869.

"I herewith certify that the Rangoon Engine Oil, manufactured by Messrs. Chas. Price and Co., is free from any material which can produce corrosion of the metal work of machinery. It is indeed calculated to protect metallic surfaces from oxidation.

"The lubricating power of this oil is equal to Sperm or Lard Oil.

"T. W. KEATES, F.C.S., &c. &c."

Every parcel of the Oil sent from the work bears the Trade Mark of the Firm.

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BLOWING ENGINES, WINDING ENGINES,

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For the REMOVAL and PREVENTION of INCRUSTATIONS in STEAM BOILERS, is in extensive use among Collieries, Ironworks, and Mills in Scotland; also, with great success, on the North British Railway Company's Locomotives.

Net price, 15s. per cwt., carriage paid; 5 per cent. off 1 ton orders; free from acids.

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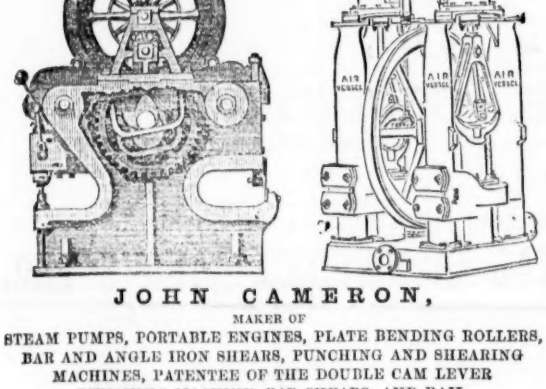
SPECIALLY RECOMMENDED for LOCOMOTIVES, being completely soluble in water, and only requires to be put into the tender.



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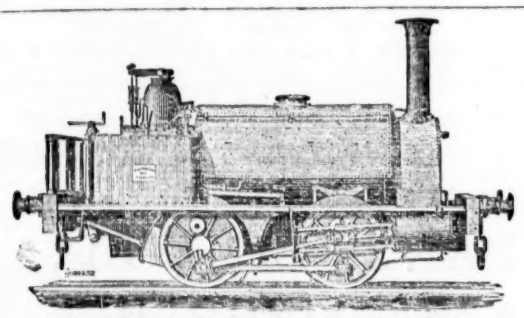

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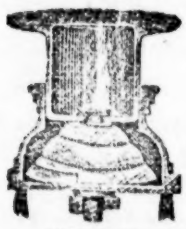

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By a special method of preparation, this leather is made solid, perfectly close in texture, and impermeable to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be made. It may be had of all dealers in leather, and of—

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CRANE, INCLINE, AND PIT CHAINS,

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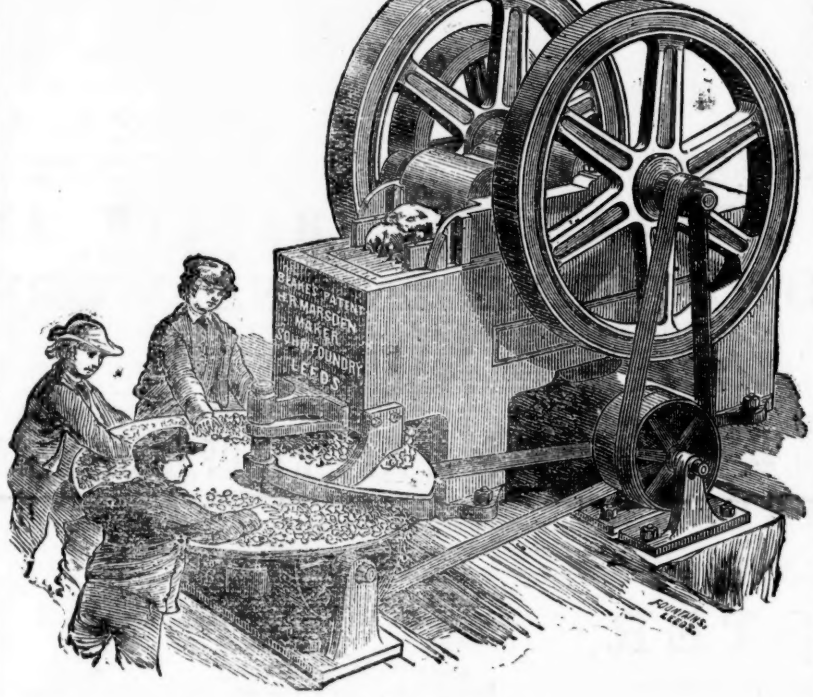
BLAKE'S PATENT STONE BREAKER,

OR ORE-CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

This is the only machine that has proved a success. This machine was shown in full operation at the Royal Agricultural Society's Show at Manchester, and at the Highland Agricultural Society's Show at Edinburgh, where it broke 1½ ton of the hardest trap or whinstone in eight minutes, and was AWARDED TWO FIRST-CLASS SILVER MEDALS. It has also just received a SPECIAL GOLD MEDAL at Santiago, Chili.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last 12 months, and Capt. Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.

For the Parys Mining Company,
H. R. Marsden, Esq. JAMES WILLIAMS.

The Van Mining Company (Limited), Van Mines, Llanidloes, Feb. 6, 1871.—Our machine, a 10 by 7, is now breaking 180 tons of stone for the crusher every 24 hours. I may say, of all our machinery, that for simplicity of construction and dispatch in their work, they are equal to anything in the kingdom, but your stone breaker surpasses them all. W. WILLIAMS.
H. R. Marsden, Esq., Leeds.

Chacewater, Cornwall, Jan. 27, 1869.—I have great pleasure in stating that the patent stone breaker I bought of you some three years ago for mines in Chili, continues to do its work well, and gives great satisfaction. It crushes the hardest copper ore stone—put it through ½ inch size by horse power—with great ease. I can safely recommend it to all in want of a crusher; can be driven by steam, water, or horse power.
H. R. Marsden, Esq. JAMES PHILLIPS.

Terras Tin Mining Co. (Limited), near Grampound Road, Cornwall, Jan. 1871.—Blake's patent stone crusher, supplied by you to this company, is a fascination—the wonder and admiration of the neighbourhood. Its simplicity is also surprising. Persons visiting it when not at work have been heard to remark, "This can't be all of the machine." It will crush to a small size from 8 to 10 tons of very hard and tough elvan rock per hour; taking into its leviathan jaws pieces of the hardest rock, weighing 200 lbs. or more, masticating the same into small bits with as much apparent ease and pleasure as does a horse his mouthful of oats. On every 100 tons of the rock crushed by the machine there is a direct saving to the company of not less than £5 over the process of hand labour previously adopted by them, and the indirect saving much more, the machine being ever ready to perform the duties required of it. It breaks the stuff much smaller, and is form so fitted for the stamps, that they will pulverise one-third more in a given time than when performed by hand labour.
JOS. GILBERT MARTIN.
H. R. Marsden, Esq., Leeds.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quarts. WM. DANIEL.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.
WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

Your stone breaker gives us great satisfaction. We have broken 101 tons of Spanish pyrites with it in seven hours. EDWARD AARON.
H. R. Marsden, Esq. Weston, near Runcorn.

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MEADOW LANE, LEEDS,

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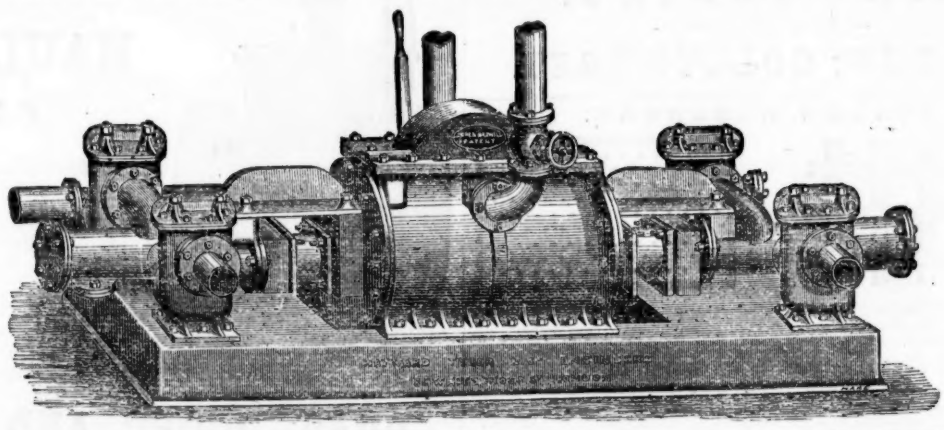

The great success of HAYWARD TYLER and CO.'S PATENT "UNIVERSAL" STEAM PUMPS, may be seen from the following Testimonial, in addition to many others in their possession.

TESTIMONIAL.

HAYDOCK, ASHTON EDGE GREEN, AND PARK COLLIERIES, near ST. HELEN'S, LANCASHIRE, October 18th, 1871.

GENTLEMEN,—We have one of your "UNIVERSAL" STEAM PUMPS continuously at work during the last ten months, and it does its work very well. *It is suspended in a new shaft* 50 yards deep, the steam to supply it being generated on the surface of the ground.
Yours truly,
(Signed) RICHARD EVANS AND CO.

Full particulars, post free, on application to—

HAYWARD TYLER AND CO.,

84 AND 85, UPPER WHITECROSS STREET, LONDON, E.C.

Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office, 26, FLEET STREET, E.C., where all communications are requested to be addressed.—*Oct. 5, 1872.*

SUPPLEMENT.

THE MINING JOURNAL,

Railway and Commercial Gazette.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

EXTRACTS FROM DICKER'S "AUSTRALIAN & LONDON GAZETTE."

LONDON, SATURDAY, OCTOBER 5, 1872.

GOLD AND THE GOLD-FIELDS.

—o—

DURING the past month mining has been pursued on all the gold-fields of the colony in the usual steady manner, and with the ordinary amount of success, with the exception of the case of one company, the Great Extended Hustler's Tribute, the yields of which have fallen off in a somewhat serious ratio from the high averages recorded during the previous eight or nine months, in which the famous reef in the mine had been worked. There has, however, been a most serious depreciation in the market value of the shares in most of the Sandhurst quartz mines, which were previously held in the greatest estimation, and reached very high prices indeed. The depreciation referred to may be ascribed to several causes, the principal of which was, no doubt, the vast amount of speculation in the mere buying and selling of shares that had taken place for some months previously, and which had forced many of the shares, more especially those of the Great Extended Hustler's Tribute Company, to extreme prices, and to the falling off in the yield of that mine, combined with a panic-stricken fear among holders of the shares that the mine was worked out. There was also another cause, which doubtless tended to the reduction of value of Sandhurst shares generally, namely, the fact that through the success that had attended the search for auriferous reefs in the district, an exceedingly large number of prospecting mines had been commenced and worked, which necessarily led to the making of calls. It now appears that the resources of the holders of the shares of some of these companies were not equal to the demands made upon them for working their mines, and also that some of the companies were formed for mere speculative purposes by promoters, on the assumption that, as mining property was then so anxiously sought after, they, as promoters, would be enabled to make good profit out of the sale of the shares. Many of these prospecting companies have already collapsed through the forfeiture of the shares by the shareholders, but a good number are still actively progressing, and from these the district must ultimately reap considerable benefit.

The great fall in the price of the Extended Hustler's Tribute shares, and the consequent reduction in value of those of other companies, appears to disinterested spectators at a distance to be in a measure unaccounted for. From a report furnished to the shareholders at the half-yearly meeting of the company, held on the 26th July, it was seen that, from the 26th October last, when the first return from the reef was chronicled, to the 13th July, 1872, 48,033 oz. of gold had been obtained; and so little had it cost to work the mine that 164,500*l.* had been paid in dividends to shareholders, or at the rate of 5*l.* 17*s.* 6*d.* per share. A report had arisen that the reef was worked out, which no doubt was the great reason of the fall, but it was stated then that there was at least six months' work in sight at the level then being mined, and the best skill which could be obtained has, after examination since, pronounced such to be the case. There was also every reasonable prospect, that when a lower level was reached in the mine, stone of a very rich character, perhaps equal to that already worked, would be found, but the shareholders and the general public, in the panic, seemed unable to think of the future and to believe only that the mine was exhausted. The shares which at the departure of the last mail were worth about 5*l.* each, and which some weeks previously were sold at as high as 9*l.*, receded rapidly. until at one time in the month they were sold as low as 38*s.* They have, however, since then advanced in price, and are now worth 2*l.* 13*s.* The Great Extended Hustler's Company, of which the Tribute Company is an offshoot, were also affected by the panic, though, so far as their shares were concerned, there was no ground whatever for a fall in price, the returns from the mine being as large as ever. From being worth 17*l.* 10*s.* each, about four weeks ago, they fell in little more than a week to 11*l.*, but in regard to them increased confidence was soon manifested, and they are now worth 14*l.* 10*s.* The yield of the company for the fortnight ending July 20 was 1226 oz., and for the fortnight ending August 3, 1272 oz., and the mining manager reports that the mine is looking very well at present. With the number of good mines which Sandhurst possesses, it is impossible that the depression recently experienced can be anything but temporary, and a reaction is said to be already commencing.

As regards the mines in the Ballarat division of the Ballarat mining district, there is little news of importance to record, but it is satisfactory to say the yields of gold and the dividends to the shareholders keep up to a steady monthly average. The Band and Albion Consols alluvial mine alone yields something like an average of 1000 oz. per week. From the other divisions of the same district the reports are of an encouraging nature, more especially from Steiglitz and Elaine, where some reefs have been discovered which are considered to be very valuable.

The prospects of the Castlemaine district are much brighter now than they have been for many years, and great activity and enterprise is being shown in the general development of the district. The new Caledonia Company recently obtained 786 oz. of gold for one fortnight's crushing, but the most gratifying news in the district during the month was the discovery in the Ajax Company's claim of a run of rich stone at the 300-feet level. Although the country thereabouts had been worked over and over again on the surface and down to the water level, it had not been tried below that depth until the Ajax Company tried it. Their workings are now down to 400 feet, and at the 300-feet level they found quartz which gave a very handsome return when a sample was operated on, the yield from a tin-dishful being 4oz. The success of the Company below the water level has led to a confident hope that a good portion of the country will be found as profitable as it is estimated to be in the Ajax mine.

It was often stated during the earlier years of the gold-fields history of this colony that no gold would ever be found in the neighbourhood of Melbourne. The statement, however, has not proved a true one, and it may be that we shall yet discover profitable mines in the vicinity of the city. For some time past a quartz reef has been worked profitably at Diamond Creek, only seventeen miles from Melbourne, and the proprietors have recently erected extensive machinery and appliances of a first-class character to work the reef. The washing-up and retorting after the first crushing with the new machinery took place on the 19th of last month, and resulted in a return of 116 oz. of smelted gold from 55 tons of quartz, which was considered very good.

Referring to the discovery last month of a 538oz. nugget in the Dunolly district, the *Express* states that the prize was "found at the Shoots, about three miles from Dunolly, in the wall of an old trench that was cut about nine years ago, when a large number of men were at work in the locality. The successive rainfalls had, with the continuous washing and crumbling away of the soil, brought this handsome little fortune into daylight to be dropped upon by a hardworking miner named Davey, who was passing by, and, seeing what looked like a speck of gold, he applied his pick, and knocked out his long-sought pile."

A rather interesting race is going on just now between the New North Clunes and the Magdala Companies, to see who is to get the sum of 1000*l.* which is said to have been offered by the Government of the day to the first mining company that finds gold at or below 1000 feet from the surface. The Magdala's shaft is down 950 feet; the New North Clunes pump shaft is down 1004 feet, and the latter has apparently a great advantage; but some people think the Magdala will get the gold first, because they allege that their shaft is right over the lode, and must pass through it either above or below the 1000 feet, while the New North Clunes may have to drive a long way before they find golden stone. Then, again, if the Magdala should strike golden stone before they get 1000 feet down, the chances are that the reef will have

(*Continued on page* 4.)

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE.

SATURDAY, OCTOBER 5, 1872.

LIST of the PRINCIPAL DIVIDENDS PAID in VICTORIA DURING the MONTH ending JULY 18, 1872.

ALLUVIAL.

Names of Companies.	Amount per Share.	Date.	No. of Shares.	Dividend.
	£ s. d.			£ s. d.
Alma Consols, Maryborough	0 2 0	July 6	6,000	600 0 0
Argyle, Linton's	0 4 0	,, 6	3,200	640 0 0
Band and Albion Consols, Ballarat ...	0 4 0	June 22	22,450	4,490 0 0
Band of Hope, Maryborough	0 2 0	,, 29	6,000	600 0 0
	0 2 0	July 13		600 0 0
Galatea, Scarsdale	0 5 0	,, 6	2,100	525 0 0
Gladstone, Maryborough	0 1 6	June 22	6,000	450 0 0
	0 1 6	July 6		450 0 0
Golden Lake, Springdallah	0 5 0	June 22	4,400	1,100 0 0
Golden Stream, Smythesdale	0 10 0	July 6	2,000	1,000 0 0
Haddon, Haddon...	3 10 0	June 22	64	224 0 0
	2 0 0	July 6		128 0 0
John Bright, Maryborough	0 2 0	June 29	6,000	600 0 0
	0 4 0	July 13		1,200 0 0
Little Stream, Smythesdale	14 0 0	,, 13	14	196 0 0
Phœnix, Sebastopol	0 6 3	June 22	2,000	625 0 0
Seaham, Maryborough	0 2 0	,, 29	6,000	600 0 0
	0 1 0	July 13		300 0 0
Try Again, Smythesdale	15 0 0	June 29	23	345 0 0
	17 0 0	July 13		391 0 0
				£15,064 0 0

QUARTZ.

	£ s. d.			£ s. d.
Ajax, Alexandra	0 0 2	July 6	10,000	83 6 8
Bendigo and Ballarat Freehold, Sandhurst	0 10 0	June 29	500	250 0 0
Black Hill, Ballarat	0 2 6	July 13	2,480	310 0 0
C. C. Freehold Tribute, Sandhurst ...	0 0 5	,, 13	24,000	500 0 0
Clunes Freehold, Clunes	0 4 0	June 22	2,000	400 0 0
Cornish, Daylesford	0 5 0	July 13	1,300	325 0 0
Cornish United, Sandhurst	1 0 0	June 22	800	800 0 0
Costerfield G. & A., Costerfield ...	1 0 0	July 13	2,000	2,000 0 0
Eastwood's Quartz, Sandhurst... ...	3 5 0	,, 13	24	78 0 0
Empire, Sandhurst	0 0 6	June 29	24,000	600 0 0
G. G. Consolidated, Sandhurst ...	0 1 0	July 6	49,000	2,450 0 0
Glengonner, Lauriston	0 2 0	,, 6	2,000	200 0 0
Golden Sovereign, Sandhurst	0 0 6	June 29	24,000	600 0 0
Great Extended Hustler's, Sandhurst	0 2 0	,, 29	28,000	2,800 0 0
	0 1 6	July 13		2,100 0 0
Great Extended Hustler's Tribute, No. 1, Sandhurst	0 5 0	June 22	28,000	7,000 0 0
	0 3 6	July 6		4,900 0 0
Harbinger, Gipps' Land...	0 2 0	June 22	3,200	320 0 0
Imperial, Ballarat	0 10 0	,, 29	300	150 0 0
Lazarus New Chum, Sandhurst ...	0 0 6	July 13	45,000	1,125 0 0
Long Tunnel, Walhalla	2 10 0	,, 13	2,400	6,000 0 0
New Chum and Belle Vue Railway Reserve, Sandhurst	0 1 0	,, 6	2,8000	1,400 0 0
New North Clunes, Clunes	1 0 0	June 29	2,056	2,056 0 0
	3 0 0	July 13		6,168 0 0
North Cross Reef, Pleasant Creek ...	0 16 0	June 22	10,000	8,000 0 0
	0 16 0	July 6		8,000 0 0
North Fear-Not, Daylesford	0 0 4	June 29	24,000	400 0 0
Nova Scotia, Pleasant Creek	2 10 0	July 13	40	100 0 0
Red Jacket, Bright	0 2 6	June 22	3,000	375 0 0
Shenandoah, New Chum and Belle Vue Tribute, Sandhurst	0 0 6	,, 29	24,000	600 0 0
	0 0 6	July 13		600 0 0
Troubadour Tribute, Maldon... ...	0 0 6	June 29	32,000	800 0 0
Unity, Sandhurst	0 0 6	July 13	20,000	500 0 0
Victoria Gold Mines, Sandhurst ...	0 1 0	June 22	20,274	1,013 14 0
	0 1 0	July 6		1,013 14 0
Walhalla, Gipps' Land	1 0 0	,, 13	600	600 0 0
				64,617 14 8
Dividends paid by Alluvial Mining Companies				15,064 0 0
,, ,, Quartz ,, ,, ...				64,617 14 8
				£79,681 14 8

DURING the MONTH ending AUGUST 10, 1872.

ALLUVIAL.

	£ s. d.			£ s. d.
Albion Consols, Ballarat	0 3 0	July 20	2,000	300 0 0
Argyle, Linton's	0 2 6	Aug. 3	3,200	400 0 0
Band and Albion Consols, Ballarat ...	0 4 0	July 20	22,450	4,490 0 0
Band of Hope, Maryborough	0 2 0	,, 27	6,000	600 0 0
	0 2 0	Aug. 10		600 0 0
Galatea, Scarsdale	0 5 0	,, 3	2,100	525 0 0
Gladstone, Maryborough	0 1 0	July 20	6,000	300 0 0
	0 1 0	Aug. 3		300 0 0
Golden Lake, Springdallah	0 5 0	July 20	4,400	1,100 0 0
Golden Stream, Scarsdale	0 10 0	Aug. 3	2,000	1,000 0 0
Gravel Pits, Ballarat	0 5 0	July 20	1,100	275 0 0
Haddon, Haddon...	2 0 0	,, 20	64	128 0 0
	3 0 0	Aug. 3		192 0 0
John Bright, Maryborough	0 5 0	July 27	6,000	1,500 0 0
	0 2 0	Aug. 10		600 0 0
Seaham, Maryborough	0 2 0	July 27	6,000	600 0 0
	0 3 0	Aug. 10		900 0 0
Telegraph, Huntly	0 0 5	,, 10	24,000	500 0 0
Try-Again, Smythesdale	13 0 0	July 27	23	299 0 0
				£14,609 0 0

QUARTZ.

	£ s. d.			£ s. d.
Alabama, Sandhurst	37 4 0	July 27	10	372 0 0
Bellevue, Sandhurst	0 0 1	,, 20	24,000	100 0 0
C. C. Freehold Tribute, Sandhurst ...	0 0 3	Aug. 10	24,000	300 0 0
Champion, Sandhurst	0 0 2	,, 3	24,000	200 0 0
Cornish, Daylesford	0 5 0	July 27	1,300	325 0 0
	0 5 0	Aug. 10		325 0 0
Eastwood's Quartz, Sandhurst... ...	5 0 0	July 27	24	120 0 0
Glengonner, Lauriston	0 2 0	,, 29	2,000	200 0 0
	0 2 6	Aug. 3		250 0 0
Golden Fleece, Sandhurst	0 0 6	,, 3	20,000	500 0 0
Great Extended Hustler's Reef, Sandhurst	0 2 6	July 27	28,000	3,500 0 0
	0 2 6	Aug. 10		3,500 0 0
Great Extended Hustler's Tribute, Sandhurst...	0 3 6	July 20	28,000	4,900 0 0
Great Extended Hustler's Tribute, No. 1, Sandhurst...	0 2 0	Aug. 3	28,000	2,800 0 0
Liverpool Tribute, Sandhurst	0 0 3	July 20	24,000	300 0 0
Long Tunnel, Stringer's Creek ...	3 0 0	Aug. 10	2,400	7,200 0 0
Morning Star, Blackwood	110 0 0	July 27	4	440 0 0
New Caledonian, Castlemaine ...	0 1 6	Aug. 3	24,000	1,800 0 0
New Chum & Belle Vue Railway Reserve, Sandhurst	0 0 9	July 20	28,000	1,050 0 0
	0 1 0	Aug. 3		1,400 0 0
New North Clunes, Clunes	1 0 0	July 27	2,056	2,056 0 0
North Cross Reef, Pleasant Creek ...	0 16 0	,, 20	10,000	8,000 0 0
	1 0 0	Aug. 3		10,000 0 0
North Fear-Not, Daylesford	0 0 3	July 20	24,000	300 0 0
North Johnson's, Sandhurst	0 0 6	Aug. 10	22,000	550 0 0

QUARTZ—*continued.*

Names of Companies.	Amount per Share.	Date.	No. of Shares.	Dividend.
	£ s. d.			£ s. d.
Old Chum, Sandhurst	0 1 0	,, 3	27,000	1,350 0 0
Pandora, Sandhurst	0 1 0	July 20	28,000	1,400 0 0
St. Mungo, Sandhurst	0 0 6	,, 27	24,000	600 0 0
Specimen, Jamieson	0 0 10	Aug. 10	48,000	2,000 0 0
Speculation, Maldon	0 1 0	,, 10	2,400	120 0 0
Troubadour Tribute, Maldon	0 0 6	,, 10	32,000	800 0 0
Union, Diamond Creek	0 0 3	,, 3	20,000	250 0 0
	0 0 3	,, 10		250 0 0
Victoria, Llanelly...	0 0 6	,, 10	6,000	150 0 0
Victoria Reef Gold Mines, Sandhurst...	0 1 0	,, 3	20,274	1,013 14 0
				£58,421 14 0
Dividends paid by Alluvial Mining Companies				14,609 0 0
,, ,, ,, Quartz ,, ,, ...				58,421 14 0
				£73,030 14 0

VICTORIAN MINES.

THE WINTER'S FREEHOLD GOLD MINING COMPANY, LIMITED, BALLARAT, VICTORIA, *August 13th*, 1872.—*Re Hand and Band.*—As stated in my last letter, the Hand and Band Company applied to inspect our northern workings. The case came on before his Honour Judge Molesworth, July 18th, and again July 25th. The application was dismissed with costs. *Finance.*—We have been enabled to pay another 1000*l.* off the bank debt. *Mine Report.—No. 1 Shaft.*—I have very little news of importance to communicate this month. The new mine manager has made several changes in the drives since he took office, and we have not obtained so much gold. A new low level has been started near No. 5 rise to go about 2000 feet towards the north-east angle; by this means the horses can be taken nearly to the face, and there will be a great saving in the cost of trucking the dirt to the shoot. A drive is being carried to the west, another to the north, and the main level to the south. A bore will be put up in the south drive this week to prove our position. The drive from No. 3 Consols is not into paying wash yet, and more than two-thirds of our men are working dead ground at present, the manager being anxious to find the outlet for the gutter from which we are now obtaining the gold. The Consols are in some remarkably rich ground at present; their month's yield is 4441 oz. *No. 2 Shaft.*—We are about again letting this shaft upon tribute to some of the present tributors of No. 5 Consols, who know the run of the ground. Both Nos. 1 and 5 Consols have found fresh tributaries coming from the westward, some of them are proving very rich. [The *Ballarat Star*, of July 29th, mentions that the prospects of the mine are quite as promising as they were a month ago.—ED. A. and L. G.]

Gold Report—No. 1 Shaft.

1872.		oz.	dwt.	1872.		oz.	dwt.
July 17	Yield	19	1	Aug. 1	Yield	17	3
,, 18	,,	23	15	,, 2	,,	14	18
,, 19	,,	21	13	,, 3	,,	30	15
,, 20	,,	30	0	,, 5	,,	27	5
,, 22	,,	18	18	,, 7	,,	24	1
,, 23	,,	27	11	,, 8	,,	26	3
,, 24	,,	35	3	,, 9	,,	15	5
,, 25	,,	26	2	,, 10	,,	45	2
,, 26	,,	14	11	,, 12	,,	17	19
,, 27	,,	30	3	,, 13	,,	10	13
,, 29	,,	22	14				
,, 30	,,	14	10		*Total*	542	1
,, 31	,,	22	16				

MARINER'S REEF QUARTZ MINING AND CRUSHING COMPANY, MARYBOROUGH, VICTORIA, AUSTRALIA, *Aug.* 9, 1872.—I forward particulars of the depth of shaft cut down during this week, viz., 10 feet, making the total cut down 424 feet, and from brace 444 feet 6 inches; and during the month ending to-day, 53 feet have been cut down. The ground is still favourable for sinking, and for a few feet during the month we passed through a bed of soft slate and sandstone, with patches of coarse quartz and small leaders, but saw no gold. We expect about 90 feet farther will bring us down to the 550-feet level. The pumps are hanging heavy on the *yokes*, and we intend next week to put the present lift in a cistern, and sink with a fresh one. The tributors not being able to find anything paying have given over. The secretary writes: "Mr. Hampton reports, as above, good progress for the month, and we look forward to this half-year's operations showing some results. In a very short time the 550-feet level will be reached, when it will be desirable to open out southward on the reef, and perhaps also at the 450-feet level.

LONDON AND ST. ARNAUD GOLD AND SILVER MINES COMPANY, LIMITED.—*First General Meeting of Shareholders.*—This meeting was held at the offices of the company, on Thursday, October 3rd, 1872. The business was mainly *pro forma*. The report was read and adopted, and the following necessary alterations were made in the Articles of Association:—

Clause 5.—In place of "Foreign Seals Act," substitute "Companies Seals Act, of 1864."

,, 58.—In place of first paragraph, commencing "Every Shareholder," down to "hundred votes," substitute "Every Shareholder shall be entitled to votes in proportion to the number of Shares held by him as follows, that is to say:—

For 5 Shares	... ...	One Vote.
,, 15 ,,	... ...	Two Votes.
,, 40 ,,	... ...	Three ,,
,, 70 ,,	... ...	Four ,,
,, 100 ,,	... ...	Five ,,

and one Vote in addition for every hundred Shares after the first hundred Shares held by him."

,, 63.—Between the words "mandate" and "appointing" (p. 18), insert the words "other than power of attorney."

,, 64.—New Clause.

MELBOURNE REGISTER.

64.—There shall be a Register of Shares in Victoria, and it shall be in the discretion of the Directors in England to fix the number of Shares upon that Register, and from time to time, as occasion may require, to alter and vary that number. And it shall be competent for Directors in Victoria to transfer any or all of such Shares on the Register in Victoria, subject to such conditions as may be determined by them.

,, 66.—For the word "eight," substitute "nine."

Authority was then given for the issue of the fully paid-up shares in part payment of the purchase money. The Chairman was able to inform the meeting that a telegram had been received from the manager and engineer at San Francisco, informing the Board that the castings for the Stetefeldt furnace were in progress, and would be ready for shipment to accompany the company's officers by the steamer which was to leave that port for Melbourne *via* New Zealand on the 9th of October.

NORTH COSTERFIELD GOLD AND ANTIMONY MINING COMPANY, *August 13th*, 1872.—The whim shaft is progressing well, and in the course of another two months the lode will I think be reached in this place. I leave for Costerfield to-morrow, for the purpose of arranging to start the engine shaft, and I hope next month to be enabled to report some progress with it. The first contract will be most likely for 150 feet. Our plan of operations is to carry out the suggestions of Mr. Brache contained in his report,

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

but it is more than likely that it will be found desirable to open out to the lode at perhaps 250 or 300 feet. This will greatly depend on the prospects met with in the whim, or air shaft. The old company continue their operations at different levels, and are obtaining a large quantity of antimony of first-class description. Their dividend for the month was 1*l.* again. Our works will be carried on as vigorously as possible, and I hope in the course of two or three months to be making you the first shipment of ore.

AUSTRALIAN AND NEW ZEALAND DIVIDEND GOLD MINES INVESTMENT COMPANY, *August 13th*, 1872.—During the month dividends have been paid by the New North Clunes, Victorian Gold Mines, North Johnson, and Old Chum, the two last not being yet forwarded to the bank. I applied for the new issue of the Tookey Company, and paid the first call of 5*s.* per share on 26 shares. Some of the mines are looking very well, and regular dividends will be forthcoming. An excellent report of the Central Energetic Company's prospect has reached me, and this mine will I think soon be looking up again. The Caledonian and Tokatea Companies have also paid dividends of 2*l.*, and 2*s.* per share respectively.

NEW ZEALAND MINES.

ALBURNIA GOLD MINING COMPANY, *June 22nd.*—I have not had time to visit this mine lately; the general accounts of it are, however, good. The crushing of the current month is showing up well; a fortnight of the period expired on Thursday, and then there were 600 oz. of hard-squeezed amalgam in hand. A contract to extend the main adit level 100 feet farther has just been let. The computed distance to the specimen leader is 130 feet. *June 29th.*—The weight of the melted gold is 269 oz. 7 dwt. *June 29th.*—A crushing of 300 tons of stone from the Alburnia yielded 274 oz. of gold.

ALBION GOLD MINING COMPANY, *June 22nd.*—Kelly's tribute has had a crushing of 60 tons of stone, which yielded 239 oz. of gold.

CALEDONIAN GOLD MINING COMPANY, *June 29th.*—Two hundred and sixty tons of stone were crushed last week: hence the yield per ton was much higher than it has been. This improvement in quality is to be credited to the good stone from No. 1 and No. 2 blocks; gold is freely seen in both, especially in No. 2, as the stopes approach the No. 1 level. No. 1 block is fast decreasing in size, and in the natural course of events will soon be worked out. There is nothing important to communicate about other parts of the mine. Of the bottom workings, the drives out of No. 1 winze are in 28 feet each way. That to the south carries a lode of between 5 feet and 6 feet of stone, whilst to the northward the lode, although of the same thickness between the walls, is not of such good composition, there being only about 18 inches of quartz in the centre of it. The No. 2 winze has been sunk 30 feet; the lode in it has contracted, and is fast assuming the appearance of the lode in the north drive of the No. 1 winze. There is a very strong lode at the north end of the bottom level, and in it gold was seen once last week. Several tons of the stone are to be crushed separately, on trial, as the company's old battery, this week, and also some stuff from No. 2 lode. *July 6th.*—The week's return is 424 oz. retorted gold. Less than 260 tons were crushed for it. *July 6th.*—Work continues in No. 2 lode with varying results, fair prospects being met with in some places, and poor ones in others; on the whole, however, enough gold is getting to warrant the prosecution of prospecting operations. At the upper level the lode has been followed right into the Golden Crown workings. It runs very large in this direction, 18 feet to 20 feet being the width between the walls. Holing to the Crown has decided the disputed question of the identity of this lode and the one in hand in the Cure Mine. *July 13th.*—The return for the week is 255 oz. retorted gold. Ninety tons only were crushed. The batteries were stopped at noon yesterday to give the manager an opportunity of getting some of the heaviest parts of the tailing plant into position on the platform above the berdans. The plant is very complete, consisting, as it does, of eleven Wheeler's pans and four concentrators, besides eight new berdans that are to be erected. There will be then twenty berdans available for service. There is abundance of work to keep this heavy plant going for an indefinite period. Between 8000 and 9000 tons of tailings, waiting for treatment, are already stacked in the machine yard. Although two days' crushing-time has been lost to the company this week, the return of gold promises to be a good one. *July 16th.*—The reports from the mines this morning were of such a character as induced me to go again underground, and descending to the intermediate level, I found that these were not in the least exaggerated, but, on the contrary for once, under the mark. The show in the leader this morning, to my idea, is, if anything, richer than yesterday, the gold being more in the centre of the lode, while the solid body of stone referred to as making near the foot and hanging-wall has come in larger, and in both there is a first-class show. The appearance of the lode is very good, and the gold so widely diffused, that Captain Richards is bagging the whole of it, hence the heavy quantity of picked stones in hand. Some 2 or 3 tons of this stuff is now in hand, and its quality may be judged of, when I state that the general stuff now passing through the mill is so rich that the ripples, &c., have to be cleaned out every three hours, the silver becoming so thick.

GOLDEN CROWN GOLD MINING COMPANY, *June 15th.*—For the fortnight, 28 oz. 5 dwt. melted gold has been obtained. During the same period, the tributers obtained 58 oz. 10 dwt. *June 29th.*—The company have crushed 70 tons during the fortnight, for a return of 94 oz. 17 dwt. 12 gr. of melted gold. The tributers obtained 94 oz. 12 dwt of melted gold from 40 tons. Both are working the same leader, but at different levels. *July 13th.*—The yield of this mine for the past fortnight is unusually heavy, both the tributers and the company having done well out of the stuff crushed from the cross leader. The company treated 80 tons, and obtained 309 oz. 8 dwt. melted gold; the tributers crushed 40 tons, the yield of which amounted to 97 oz. 10 dwt. melted. All that section of the leader not contained in the tribute-ground above the main level has been worked out by the company, which is now sinking a winze on the vein to test it deeper. The winze is down about 12 feet, and carries a good-looking lode with it. The tributers have yet a little of the vein to work, but will soon exhaust it. The total yield for the fortnight amounts to 406 oz. 13 dwt. A new tribute was, on Saturday, let to the tributers who have been working the cross leader in another part of the mine. Yesterday they commenced operations in the main level by opening out in the foot-wall of the No. 1 lode, just beyond the cross-cut leader, to the Manukau workings. *July 27th.*—I was slightly in error in stating on Saturday that the gold obtained by the tributers was the result of a fortnight's crushing. In reality it was the produce of about 200lbs. weight of specimens, which had been some time accumulating. The yield, 160 oz., was highly satisfactory.

IMPERIAL CROWN GOLD MINING COMPANY, LIMITED, *June 22nd*, 1872.—Mr. Errington is making good haste with his work. The old poppet-heads gearing is beginning to look bare, and in the course of a few days its place will be vacant. The whole of the old lift pieces have been removed from the shaft, and two-thirds of the new pumping lift fixed in position. Of the five lengths of main rods, huge balks of timber 35 feet long, one is in position, and another is being placed to-day. When these, and the balance of the plunger lifts, are fixed, the enormous cylinder of the bull engine will be lifted into position. This may be possibly accomplished some time next week. *July 13th.*—All the lift and rod pieces are in position, and connecting the steam gearing with the cylinder is in rapid progress. Mr. Errington speaks confidently of having men at work in the bottom of the shaft by the end of the month. *July 27th.*—The main lode has been followed nearly 70 feet from the slide at the 200-feet level, and discovers marked signs of improvement. The drive is carried along the foot wall, a small section of the lode only being kept in hand; but with the view of testing the whole body of it the manager is going to put a cross-cut through the lode at once. *August 9th.*—The works of the United Pumping Association, probably the largest in the colonies, are almost completed. A trial of portions of the machinery has been made, and everything worked satisfactorily. The impetus which will be given to deep mining in some of the richest ground on the Thames, such as the Caledonian, Tookey's, &c., will be very considerable, and the results will be looked for with some anxiety.

KURANUI GOLD MINING COMPANY, *June 15th.*—The fortnightly return is 237 oz. of retorted gold. *June 29th.*—The fortnightly yield this time amounts to 238 oz., being slightly under estimate. *July 13th.*—The fortnight's return of gold is 170 oz. melted. *July 13th.*—During the past fortnight about 500 tons of stuff were crushed to an average yield of 7 dwt. per ton. The greatest portion of the stuff was taken from the surface workings of Barry's leader, where the manager has opened out a wide cutting, and is taking everything before him to a depth of 30 ft. The yield, although low, is payable. Prospecting the deeper levels of the mine is in progress, and with fair chance of ultimate success. Indeed, a very encouraging show has been lately obtained in the drive that is following Barry's leader between the 20-fathom and 30-fathom levels in the Deep Lead ground. Gold had been followed up there at the 20-fathom level and lost, and the manager was induced to resume the search for it, where the heavy slide of the Moanataiari mine was struck in the Eureka ground, at a short distance from the Kuranui boundary. Its existence there was unsuspected, and when discovered excited some surprise, and also a surmise on the part of Mr. Kernick that, if where he had lost the gold between the 20 and 30-fathom levels the leaders were followed up to the slide, the lost shoot might be again picked up. With this object in view, he took up driving on Barry's, and after punching a hard belt of ground, and approaching to within 60 ft. of the slide, a channel of good country was met with, whilst almost simultaneously the character of the lode improved, and the stone commenced to show gold. And so the case stands at present; more will be known about the value of the new ground in the course of a week or so. The chances, however, are in favour of the company; for it is not at all unlikely that, as in the case of the Moanataiari mine, good crushing stuff will be one of the effects of the contract between the lodes and the slide. The latter underlies sharply into the mine, and will, it is thought, pass into the Shotover ground at about 200 ft. below the deepest level opened in that mine. Who can tell what improvements it may effect there? At any rate, there is room for ho , and good hope too.

PRINCE IMPERIAL GOLD MINING COMPANY, *July 13th.*—Good stone has been taken out of the No. 2 leader of the Prince Imperial claim. They have now 30 lb. specimens already on hand. Last night another fine lot of picked stone was broken out from the small vein, and to-day it also shows gold. In another week or so crushing will be commenced, and the yield may be looked forward to as the best that has been got for some time past.

SHOTOVER GOLD MINING COMPANY, *June 22nd.*—The indications of a change which I have mentioned in late reports not having been verified, driving has been discontinued in the hard bar in the north-west drive of the bottom level. This result, although disappointing, is not by any means fatal to the probability of the main lode being yet picked up. It is quite possible that that lode may have become embodied with the lode that was passed through in the above drive, and which lies immediately against the bar. It is of large size, and auriferous to the extent of 6 dwt. to the ton, and if followed up may be found to contain stone of better quality than that. And the manager has decided to follow that section of it lying against the bar, for the purpose of ascertaining whether there is a break in that bar, and whether a payable shot of gold does not exist somewhere between the drive and the Kuranui boundary. It would be premature to conjecture upon the result, but at the same time the chance of finding a run of gold is by no means a remote one. I must, however, reiterate my often expressed opinion that paying stone will have to be looked for at a greater depth than has been attained in the mine. The very fact of fine country containing golden quartz having been carried down so far (400 feet) is good earnest of better things below, and, as I have so often remarked before, co-operation on the part of adjacent mines is alone needed to enable the question to be tested at slight individual expense to the companies which may take part in the enterpriee. *July 12th.*—The contractors in the bottom level have now finished their driving, in the various directions given out, and are now securing them. For the present nothing more will be done in the shape of underground work until after the annual meeting has taken place on the 17th instant. Having this meeting in view, the manager is preparing plans for new pumps, cutting down the shaft, etc., and other preliminaries, should it be decided to resume sinking. The estimated cost of sinking the present shaft to try the deep ground would be over 5000*l.*, which is too great a cost for one single company to tackle, and therefore ought to be done on the co-operative principle, the surrounding claims participating in the outlay, as they would receive a corresponding benefit to that of the company. With regard to the sinking of the shaft, a strong feeling exists here that it ought to be sunk a considerable distance from there, as it is evident that the present depth is too shallow to intersect the long drive and other leaders that underlay from the hill. At about 100 feet deeper the great "slide" that travels through Moanataiari Company's ground will pass through this claim, and it is difficult to contemplate what effect it may have upon the run of country as the lodes that abut upon it are carrying good gold down with it. *July 20th.*—At the meeting held on July 17th, the following resolution was agreed to: "That all operations be at once suspended, and the directors be requested to confer with the directors of adjoining companies with a view of arranging some co-operative plan of working the mine."

TOOKEY GOLD MINING COMPANY (LOWE'S TRIBUTE), *July 13th.*—The crushing of 55 tons was finished this morning to a return of 129 oz. 6 dwt. melted gold.

TOKATEA COMPANY, *June 15th.*—The prospects of this mine are every day improving. Yesterday evening 100 lb. of rich specimens were taken from the top winze, and large quantities of stone hourly sent down for transmission by trucks to their battery. It is expected the company will very soon be able to keep 10 head of stamps regularly employed, when the tramway, which is in rapid course of construction from the lower level to the Government one, is finished. *June 22nd.*—800 lb. of fair specimens and about 1,200 lb. of picked stuff were crushed at the company's battery these last few days, but the retorting is not yet completed. *June 29th.—Lodgment of Gold.*—The management lodged this afternoon 599 oz. 8 dwt. in the Bank of New Zealand. *July 6th.*—In anticipation of the low-level workings being finished, a reduction of the number of men employed has taken place for the present. The tramway to connect the lower level with the Government tramway is nearly finished. The laying down of the rails is likely to be commenced to-morrow or the next day. *July 27th.*—Mr. Henry Graham has just completed an underground survey of his company's property, and reports the satisfactory nature of the workings under the management of Mr. R. Kelly, the general mine manager. *July 13th.*—This company will not retort until next week. The crushing looks well and will be up to the average of the former ones. The directors held a meeting yesterday and declared a two-shilling dividend from the proceeds of the last lot melted at Shortland.

THAMES RIVER GOLD FIELDS.

GOLD RETURNS FROM JULY 8 TO AUGUST 7.

Claim or Company	Stone crushed. Tons	cwt.	lb.	Gold. oz.	dwt.	gr.
Alburnia	300	0	0	89	0	0
Do.	25	0	0	*m*17	8	0
Albion Tribute (Belfast) ...	13	0	0	*m*8	1	0
Do.	15	0	0	*m*6	11	0
Do.	35	0	0	68	0	0
Do. (Kelly's)	60	0	0	*m*139	11	12
Do. (Poverty)	25	0	0	*m*109	11	0
Caledonian	180	0	0	637	0	0
Do.	250	0	0	811	0	0
Do.	240	0	0	700	0	0
Do.	350	0	0	1515	11	0
Golden Crown Tribute ...	0	2	0	*m*160	0	0
Do.	100	0	0	*m*119	1	0
Imperial Crown	8	0	0	*m*1	4	3
Do. Tribute	30	0	0	*m*50	3	0
Kuranui Company ...	400	0	0	*m*200	1	0
Do.	400	0	0	*m*279	0	0
Prince Imperial	53	0	0	*m*43	5	0
Tookey Tributes (Snowden)	30	0	0	*m*58	8	0
Do. (Works)	25	0	0	25	12	0
Do. (Dare)	5	0	0	25	8	0

The returns from the Thames and Coromandel gold fields are in excess of those of last month by nearly 2000 oz. They are 13,143 oz. gold from 7382 tons stone crushed. The following dividends have been paid:—Moanataiari, 5*s.*, equal to 3375*l.*; Bismarck (Coromandel), 4*s.*, equal to 1600*l*; and Tokatea (Coromandel), 2*s.*, equal to 2000*l.* The Caledonian will pay a 2*l.* dividend next week, and the Thames Company one of 7*s.* 6*d.* per share.

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

GOLD AND THE GOLD-FIELDS.

(Continued from page 1.)

such a heavy underlie that they may not get through it before they go the 1000 feet or a good deal more. It is the opinion of many people interested in mining that the first or the first two or three companies in each mining district of the colony that find gold-bearing stone at or below 1000 feet should receive a handsomer bonus than 1000*l.* The Magdala shaft will soon have cost the shareholders 20,000*l.*, without their seeing a speck of gold, and such enterprise deserves reward and encouragement.

The discovery of gold in the bore of the Bright Boring Association at a depth of 198ft. is regarded by the *Ovens and Murray Advertiser* as an event of no ordinary importance:—"With the knowledge that deep leads exist in the locality—leads on which shafts have been sunk and good prospects of gold obtained, but from working which the miners were compelled to desist, owing to excess of water and want of capital to provide the necessary appliances to cope therewith—we may be pardoned for believing that the discovery at Bright is one not only of importance to that locality, but to the whole of the district. If anything were wanting to stimulate the residents to further exertions towards the development of the resources of these districts, the success that has attended the Bright Boring Association ought to have that effect."

The *Pleasant Creek News* writes:—"A singular and unaccountable feature in connection with our deep quartz mines is being developed daily, which much surprises those well experienced in mining matters. It is the decrease of water as the greater depths are reached. In the Magdala shaft, at 950 feet the water has decreased to a minimum; in the Crown Cross Reef Company's shaft, at 800 feet, notwithstanding the two reefs recently struck, no extra water has been met with; and in the long drive of the Extended Cross Reef Company, at a depth of over 800 feet, the water is lighter than it was nearer the surface. This, if a general rule, is very important to companies engaged in deep sinking operations, as it will greatly lessen the cost of pumping machinery, which has mostly been erected hitherto on the supposition that the water would be heavier as a greater depth was reached.

The *Dunolly Express* relates the following—"On Sunday (19th July) a poor but honest man, wishing to see the last upon earth of a departed friend, and being, as he thought, too poorly clad to join in the funeral procession, took his stand on a heap of pipeclay in Quaker's Gully to watch the departure of the *cortége*, when looking down, he observed something glistening, bright, and yellow. Judging it to be gold, he stooped, and picking it up was delighted to find himself possessed of a nugget weighing just 9 oz., and worth 36*l.* On the next day, we understand, he came with it into Dunolly, and before spending a farthing upon himself, paid off all his little debts with most praiseworthy promptitude. All honour to such bright specimens as 'Possum Jack, the lucky finder."

"Gold mining," according to the *Guardian*, "is being vigorously prosecuted in the Kilmore district, and what is still more pleasing, successfully. Gold in payable quantities has been found on the Sunday Creek, and the lucky discoverers, H. Pettit and party, are very sanguine that a rich gold-field will shortly be opened up within a few miles of Kilmore."

ANTHONY TROLLOPE AT BALLARAT.

I HAVE said that, among Victoria gold fields, Ballarat is famous for alluvial dirt to be washed—not for quartz to be crushed, as is the case with Sandhurst. But the reader must not therefore suppose that Ballarat is a place of mere surface scratching—an agglomeration of gulleys from which the earth is shovelled into cradles—a congregation of "fossickers," who search about, picking and washing a bit of earth here and a bit there. The alluvial dirt which produces the greater portion of the wealth of Ballarat has not only to be brought up many hundred feet from under the surface, but it has to be sought for through underground passages thousands of feet in length, and has to be followed up by geological deductions which too often fail in their promise. I went down one such mine, called Winter's Freehold, descending 450 feet in an iron cage. I was then taken 4000 feet along a tramway in a truck drawn by a horse. At the end of that I was called upon to mount a perpendicular ladder about twenty feet high, and was then led along another tramway running apparently at right angles to the first. From this opened out the cross passages in which the miners were at work. Here we saw the loose alluvial grit—so loose that a penknife would remove it—lying on the solid rock to the breadth of about four feet. Here and there among the grit, with candle held up and some experienced miner guiding my eye, I could see the minute specks of gold in search of which these vast subterranean tunnels had been made. It seemed to be but a speck here and there—so inconsiderable as to be altogether unworthy of such labour. I was told that 150,000*l.* had been expended on this single mine, and that the machinery was the finest in the colony. I heard also that the results hitherto had not been magnificent. But it was thought that a good time was coming, and that all the money expended would certainly come back with copious interest. We were two hours seeing the mine, and I cannot say that, as regarded immediate enjoyment, the time was well spent. The place was wet and dirty and dark, and the effect to the eye very poor. But such is the result to all amateur inspectors of mines. When we had extricated ourselves from the bowels of the earth we ascended to a platform on the top of the machinery, to which the washdirt is brought up that it may be "puddled" and the gold extracted. The height enables the water and mud to run off. The dirt is placed in a round flat receptacle or trough, into which water is pumped up, and an instrument something like a harrow is worked through it. The water and mud are amalgamated, and they escape: the gold by its own weight falls to the bottom, together with stones and shingles. This is then sent down to an open spout below, through which water again runs, a man the while working it with a fork prepared for the purpose. Again the stones and mud pass off with the water, and again the gold remains behind, sinking to the bottom by its own weight. When all has escaped that will escape, and the stones which will not fall have been thrown out, then the specks of gold are seen lying thick, collected in the little furrows which are marked in the bottom of the spout. To the uninitiated eye the product of all this labour still seems to be small. The precious metal is then smelted and sold to the banks. At present the greater portion of the gold found at Ballarat is worth over 4*l.* an ounce. I must add, that they who are sanguine as to Ballarat predict a vast wealth of quartz reefs for the locality after the wash-dirt has been all extracted.—*Daily Telegraph, October* 2, 1872.

The North Costerfield Gold and Antimony Mining Company. No Liability. Costerfield, near Bendigo, Victoria, Australia.

Capital 50,000*l.* in 50,000 Shares of 1*l.* each.
Paid up 10*s.* per Share, viz.:—

20,000 Shares of 1*l.* each, 10*s.* per Share paid, = 10,000*l.* allotted in the Colony.
30,000 Shares of 1*l.* each, 10*s.* per Share paid, = 15,000*l.* to be allotted in England.

50,000 Shares. 25,000*l.* called up.

The London Agent has instructions to offer the above parcel of 30,000 Shares:—

2*s.* 6*d.* per Share to be paid on Application; 2*s.* 6*d.* on Allotment; and 5*s.* in Three Months after Allotment. The Balance, if required, in Calls not exceeding 1*s.* per Share per month.

It is estimated, however, that 10*s.* per Share will be quite sufficient for all purposes of the undertaking.

Directors in the Colony.

Robert Burrowes, Esq., M.L.A., Member of the Legislative Assembly for Sandhurst, Bendigo.
Thomson Moore, Esq., M.L.A., Member of the Legislative Assembly for Mandurang, Bendigo.
Samuel P. Lord, Esq., J.P., Melbourne.
D. A. Osborne, Esq., Melbourne.
Dr. Fitzgerald, Melbourne.
William Gardiner Sprigg, Esq., Melbourne.

London Agent.

Thomas Dicker, Esq. (formerly Editor and Proprietor of *Dicker's Mining Record*, Melbourne.)

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4, Royal Exchange Avenue, London, E.C.

The object of this Company is to work the extensive property known as the North Costerfield Mine, for both gold and antimony. Its area is 25 acres 2 roods and 4 perches, with a length on the course of the lode of 1613 feet.

The Mine adjoins the well-known Costerfield property. The lode runs between solid and well-defined walls, without fault or break, and *bears the reputation of being the finest Antimony lode in the world.—Vide* Report of J. Brache, Esq., Civil and Mining Engineer, late Superintendent of Mining Surveys to the Geological Department, Melbourne.

This Company is registered in Melbourne under the "No Liability" clause of the "Limited Liability" Act of the Colony of Victoria, which limits the amount to be called up to 1*l.* per Share.

Plans and prospectuses with the fullest information may be had, and samples of ore taken from both mines can be seen, upon application to the London Agent (who has personally inspected the lode), 4, Royal Exchange Avenue, London, E.C.

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The Winter's Freehold Gold Mining Company, Limited, Ballarat, Victoria.

Australian and New Zealand Dividend Gold Mines Investment Company, Limited, No. 1, No. 2, and No. 3 Series.

Golden Crown Gold Mining Company, Limited, Thames River, Auckland, N.Z.

The London and Thames River, N.Z., Golden Crown Company, Limited.

The Imperial Crown Gold Mining Company, Limited, Thames River, Auckland, N.Z

Albion Gold Mining Company, Thames River, Auckland, No. 3.

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